Aleutian Islands Coastal Resources Inventory and Environmental Sensitivity Maps: HYDRO (Hydrography Lines and Polygons)

Metadata also available as - [Parseable text] - [SGML]

Metadata:

- Identification Information
- Data Quality Information
- Spatial Data Organization Information
- Spatial Reference Information
- Entity and Attribute Information
- <u>Distribution Information</u>
- Metadata Reference Information

Identification Information:

Citation:

Citation Information:

Originator:

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Prince William Sound Oil Spill Recovery Institute; Aleutians West Coastal Resource Service Area (CRSA); Aleutians East Borough; Alaska Chadux Corporation; United States Coast Guard; and National Fish & Wildlife Foundation.

Publication Date: 200205

Title:

Aleutian Islands Coastal Resources Inventory and Environmental Sensitivity Maps: HYDRO (Hydrography Lines and Polygons)

Edition: First

Geospatial Data Presentation Form: Digital vector data

Series Information:

Series Name: None

Issue Identification: Aleutian Islands

Publication Information:

Publication Place: Seattle, Washington

Publisher:

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington

Other Citation Details:

Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Prince William Sound Oil Spill Recovery Institute; Aleutians West Coastal Resource Service Area (CRSA); Aleutians East Borough; Alaska Chadux Corporation; United States Coast Guard; and National Fish & Wildlife Foundation.

Description:

Abstract

This data set contains lines and polygons representing coastal hydrography used in the creation of the Environmental Sensitivity Index (ESI) for the Aleutian Islands. This data set comprises a portion of the ESI for Aleutians East Borough and Aleutians West Coastal Resource Service Area (CRSA). The HYDRO data layer contains all annotation used in producing the atlas. The annotation features are categorized into three subclasses in order to simplify the mapping and quality control procedures: GEOG or geographic features, SOC or socioeconomic features, and HYDRO or water features. These data identify the marine and coastal environments and wildlife. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources.

Purpose:

The ESI data were collected, mapped, and digitized to provide environmental data for oil spill planning and response. The Clean Water Act with amendments by the Oil Pollution Act of 1990 requires response plans for immediate and effective protection of sensitive resources.

Time_Period_of_Content:

Time Period Information:

Range of Dates/Times:

Beginning_Date: 2000 Ending Date: 2001

Currentness Reference:

These data were compiled during 2000-2001. The completeness dates for these data range from 1978 to 2001 and are documented in the Source_Information section.

Status:

Progress: Complete

Maintenance and Update Frequency: None Scheduled

Spatial Domain:

Bounding Coordinates:

West_Bounding_Coordinate: 172.42000 East_Bounding_Coordinate: -158.81002 North_Bounding_Coordinate: 58.133120 South Bounding_Coordinate: 48.351629

Keywords:

Theme:

Theme Keyword Thesaurus: None

Theme Keyword: ESI

Theme_Keyword: Sensitivity maps Theme_Keyword: Hydrography Theme_Keyword: Coastal resources Theme_Keyword: Oil spill planning

Theme_Keyword: Coastal Zone Management

Theme Keyword: Wildlife

Place:

Place Keyword Thesaurus: None Place Keyword: Aleutian Islands

Access Constraints: None

Use Constraints:

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

Browse Graphic:

Browse_Graphic_File_Name: datafig.jpg Browse Graphic File Description:

Relationships between spatial data layers and attribute data tables for the Aleutian Islands ESI data.

Browse Graphic File Type: JPEG

Data_Set_Credit:

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Prince William Sound Oil Spill Recovery Institute; Aleutians West Coastal Resource Service Area (CRSA); Aleutians East Borough; Alaska Chadux Corporation; United States Coast Guard; and National Fish & Wildlife Foundation.

Native Data Set Environment:

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.0.2) and ORACLE(r) RDBMS (version 8.0.5.0.0). The hardware configuration is Hewlett Packard workstations (models 715/50 and 712/80i) with UNIX operating system (HP-UX Release A.10.20), and PC's with Windows Operating System (NT4.0/2000). The Spatial_Data_Organization Information section refers only to the source files in the ARC export format. The following files are included in that data set: birds.e00, bio_lut.e00, biofile.e00, biores.e00, breed_e00, breed_dt.e00, esi.e00, faults.e00, fishl.e00, fishl.e00, geo.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, m_mampt.e00, mgt.e00, nests.e00, seasonal.e00, soc_dat.e00, soc_lut.e00, socecon.e00, sources.e00, species.e00, status.e00, volcanos.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biofile, biores, breed_dt, seasonal, soc_dat, soc_lut, socecon, sources, species, and status.

Data_Quality_Information:

Attribute Accuracy:

Attribute Accuracy Report:

A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.

Logical Consistency Report:

A multi-stage error checking process, described in the above Attribute_Accuracy_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles,

unnecessary node, etc.), and ORACLE(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks.

Completeness_Report:

These data represent linear and polygonal hydrography for the Aleutian Islands.

Positional Accuracy:

Horizontal Positional Accuracy:

Horizontal Positional Accuracy Report:

The hydrography data set was developed from pre-existing digital and hardcopy sources and reflects the positional accuracy of these original data. The horizontal positional accuracy of the 1:63,360 and 1:250,000 USGS topographic quads should conform to National Map Accuracy Standards at scales of 1:63,360 and 1:250,000. See the Lineage and Process_Description sections for more information on the original source data and how these data were integrated or manipulated to create the final data set.

Lineage:

Source Information:

Source Citation:

Citation Information:

Originator: Colin Plank

Publication Date: Unpublished material

Title: ESI Overflight

Geospatial Data Presentation Form: Hardcopy Map

Source_Scale_Denominator: 63360 Type_of_Source_Media: Paper

Source Time Period of Content: Time Period Information:

Single_Date/Time:

Calendar Date: 2000

Source Currentness Reference: Date of overflight

Source_Citation_Abbreviation: None Source_Contribution: Digital Shoreline

Source Information:

Source Citation:

Citation Information:

Originator: Research Planning Institute, Inc.

Publication Date: 1982

Title:

Sensitivity of Coastal Environments and Wildlife to Spilled Oil, Bristol Bay Region

Geospatial Data Presentation Form: Hardcopy Map

Publication Information:

Publication Place: Columbia, SC

Publisher: RPI, Inc.

Source Scale Denominator: Varies

Type of Source Media: Paper

 $Source_Time_Period_of_Content:$

Time Period Information:

Single_Date/Time:

Calendar Date: 1982

Source_Currentness_Reference: Date of study

Source Citation Abbreviation: None

Source Contribution: Hydrography Information

Source_Information:

Source Citation:

 $Citation_Information:$

Originator: Research Planning Institute, Inc.

Publication_Date: 1986

Title:

Sensitivity of Coastal Environments and Wildlife to Spilled Oil, Southern Alaska Peninsula

Geospatial Data Presentation Form: Hardcopy Map

Publication Information:

Publication Place: Columbia, SC

Publisher: RPI, Inc.

Source_Scale_Denominator: Varies Type of Source Media: Paper

Source Time Period of Content:

 $Time_Period_Information:$

Single Date/Time:

Calendar Date: 1986

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Source Citation Abbreviation: None
                   Source Contribution: Hydrography Information
             Source Information:
                   Source Citation:
                          Citation Information:
                                 Originator: U.S. Geological Survey
                                Publication Date: 1982
                                Title: Digital Line Graphs
                                 Geospatial Data Presentation Form: Hardcopy Map
                                 Publication Information:
                                       Publication Place: Columbia, SC
                                       Publisher: Alaska Department of Fish and Game
                   Source Scale Denominator: Varies
                   Type_of_Source_Media: Paper
                   Source Time Period of Content:
                          \overline{T}ime \overline{P}eriod \overline{I}nformation:
                                Single Date/Time:
                                       Calendar Date: 1982
                          Source Currentness Reference: Date of study
                   Source Citation Abbreviation: None
                   Source Contribution: Hydrography Information
             Process Step:
                   Process Description:
                          The shoreline was derived primarily from U.S. Geological Survey (USGS) digital line graph (DLG) files and
                          Alaska Department of Natural Resources (DNR) data. In some cases, gross shoreline changes or additional
                          hydrography polygons were sketched during overflights. These polygons were then digitized from the scanned
                          and registered hardcopy maps. Also, additional hydrographic features were digitized directly from scanned
                          USGS topographic maps. Hardcopy maps of the attributed shoreline and habitat polygons were plotted at
                          1:63,360 scale for verification of attributes.
                   Process Date: 200111
                   Process Contact:
                          Contact Information:
                                 Contact Organization Primary:
                                       Contact Organization: NOAA, Office of Response and Restoration
                                       Contact Person: Jill Petersen
                                 Contact Address:
                                       Address Type: Physical address
                                       Address: 7600 Sand Point Way, N.E.
                                       City: Seattle
                                       State or Province: Washington
                                       Postal Code: 98115-6349
                                 Contact Voice Telephone: (206) 526-6944
                                 Contact Facsimile Telephone: (206) 526-6329
                                 Contact Electronic Mail Address: Jill.Petersen@noaa.gov
Spatial Data Organization Information:
      Direct Spatial Reference Method: Vector
      Point and Vector Object Information:
             SDTS Terms Description:
                   SDTS Point and Vector Object Type: GT-polygon composed of rings
                   Point and Vector Object Count: 2387
             SDTS Terms Description:
```

SDTS_Point_and_Vector_Object_Type: G1-polygon composed of rings
Point_and_Vector_Object_Count: 2387

SDTS_Terms_Description:
 SDTS_Point_and_Vector_Object_Type: Area point
 Point_and_Vector_Object_Count: 2387

SDTS_Terms_Description:
 SDTS_Point_and_Vector_Object_Type: Complete chain
Point_and_Vector_Object_Count: 2963

SDTS_Terms_Description:
 SDTS_Point_and_Vector_Object_Type: Link
 Point_and_Vector_Object_Count: 255692

SDTS_Terms_Description:
 SDTS_Point_and_Vector_Object_Type: Label Point
Point_and_Vector_Object_Count: 182

SDTS_Terms_Description:

Source Currentness Reference: Date of study

```
Spatial Reference Information:
      Horizontal Coordinate System Definition:
            Geographic:
                  Latitude Resolution: 0.00005
                  Longitude Resolution: 0.00005
                  Geographic Coordinate Units: Decimal degrees
            Geodetic Model:
                  Horizontal Datum Name: North American Datum of 1927
                  Ellipsoid Name: Clark 1866
                  Semi-major Axis: 6378206.4
                  Denominator of Flattening Ratio: 294.978698
Entity and Attribute Information:
      Detailed Description:
            Entity_Type:
                  Entity_Type_Label: HYDRO.AAT
                  Entity Type Definition:
                        The HYDRO.AAT table contains attribute information for the lines representing linear hydrography features in
                        the HYDRO data layer.
                  Entity Type Definition Source: Research Planning, Inc.
            Attribute:
                  Attribute Label: LINE
                  Attribute Definition: Type of geographic feature.
                  Attribute Definition Source: Research Planning, Inc.
                  Attribute Domain Values:
                        Enumerated Domain:
                               Enumerated Domain Value: H
                               Enumerated Domain Value Definition: Hydrography
                               Enumerated Domain Value Definition Source: Research Planning, Inc.
                        Enumerated Domain:
                               Enumerated Domain Value: I
                               Enumerated Domain Value Definition: Index
                               Enumerated Domain Value Definition Source: Research Planning, Inc.
                        Enumerated Domain:
                               Enumerated Domain Value: S
                               Enumerated Domain_Value_Definition: Shoreline
                               Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute:
                  Attribute Label: SOURCE_ID
                  Attribute Definition: Data source of the ESI arcs
                  Attribute_Definition Source: Research Planning, Inc.
                  Attribute Domain Values:
                        Enumerated Domain:
                               Enumerated Domain Value: 1
                               Enumerated Domain Value Definition: Original digital information (Alaska DNR)
                               Enumerated Domain Value Definition Source: Research Planning, Inc.
                        Enumerated Domain:
                               Enumerated Domain Value: 2
                               Enumerated Domain Value Definition: Low-altitude overflights by Research Planning, Inc.
                               Enumerated Domain Value Definition Source: Research Planning, Inc.
                        Enumerated Domain:
                               Enumerated Domain Value: 5
                               Enumerated Domain Value Definition: Digitized from 1:63,360-USGS topographic quadrangle
                               Enumerated Domain Value Definition Source: Research Planning, Inc.
                        Enumerated Domain:
                               Enumerated Domain Value: 7
                               Enumerated Domain Value Definition: RPI index
                               Enumerated Domain Value Definition Source: Research Planning, Inc.
                        Enumerated Domain:
```

Enumerated Domain Value: 8

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Enumerated Domain Value Definition Source: Research Planning, Inc.
                         Enumerated Domain:
                               Enumerated Domain Value: 9
                               Enumerated Domain Value Definition: Digitized from Bristol Bay ESI Atlas
                               Enumerated Domain Value Definition Source: Research Planning, Inc.
                         Enumerated Domain:
                               Enumerated Domain Value: 10
                               Enumerated Domain Value Definition: Digitized from S. Alaska Peninsula ESI Atlas
                               Enumerated Domain Value Definition Source: Research Planning, Inc.
      Detailed Description:
            Entity Type:
                   Entity Type Label: HYDRO.PAT
                   Entity Type Definition:
                         The HYDRO.PAT table contains attribute information for the polygons representing polygonal hydrography
                         features in the HYDRO data layer.
                   Entity Type Definition Source: Research Planning, Inc.
            Attribute:
                   Attribute Label: WATER CODE
                  Attribute_Definition: Specifies a polygon as either water or land
                  Attribute Definition Source: Research Planning, Inc.
                   Attribute Domain Values:
                         Enumerated Domain:
                               Enumerated Domain Value: L
                               Enumerated Domain Value Definition: Land
                               Enumerated Domain Value Definition Source: Research Planning, Inc.
                         Enumerated Domain:
                               Enumerated Domain Value: W
                               Enumerated Domain Value Definition: Water
                               Enumerated Domain Value Definition Source: Research Planning, Inc.
      Detailed Description:
            Entity Type:
                  Entity Type Label: ANNO.GEOG
                   Entity Type Definition:
                         The spatial data layer HYDRO contains label points representing annotation for geographic features.
                   Entity Type Definition Source: Research Planning, Inc.
      Detailed Description:
            Entity Type:
                   Entity Type Label: ANNO.HYDRO
                   Entity Type Definition:
                         The spatial data layer HYDRO contains label points representing annotation for water features.
                   Entity Type Definition Source: Research Planning, Inc.
      Detailed Description:
            Entity Type:
                   Entity Type Label: ANNO.SOC
                   Entity Type Definition:
                         The spatial data layer HYDRO contains label points representing annotation for socioeconomic features.
                   Entity Type Definition Source: Research Planning, Inc.
Distribution Information:
      Distributor:
            Contact Information:
                   Contact Person Primary:
                         Contact Person: John Kaperick
                         Contact Organization: NOAA, Office of Response and Restoration
                   Contact Address:
                         Address Type: Physical Address
                         Address: 7600 Sand Point Way, N.E.
                         City: Seattle
```

State_or_Province: Washington Postal_Code: 98115-6349 Contact_Voice_Telephone: (206) 526-6400 Contact_Facsimile_Telephone: (206) 526-6329

Resource Description: ESI Atlas for the Aleutian Islands

Distribution Liability:

Enumerated Domain Value Definition: USGS DLG's

Although these data have been processed successfully on a computer system at the National Oceanic and Atmospheric Administration, no warranty, expressed or implied, is made by NOAA regarding the utility of the data on any other system, nor shall the act of distribution constitute any such warranty. NOAA warrants the delivery of this product in computer-readable format, and will offer a replacement copy of the product when the product is determined unreadable by computer-input peripherals, or when the physical medium is delivered in damaged condition.

Custom Order Process:

Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to a wider community of GIS/mapping users. Distribution formats include ARC export, MOSS and Shape files, and MARPLOT map folders. An ArcView ESI project and ESI_Viewer product are also included on the distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

Metadata Reference Information: Metadata Date: 200205 Metadata Review Date: 200205 Metadata Contact: Contact Information: Contact Person Primary: Contact Person: Jill Petersen Contact Organization: NOAA, Office of Response and Restoration Contact Position: GIS Manager Contact Address: Address Type: Physical Address Address: 7600 Sand Point Way, N.E. City: Seattle State or Province: Washington Postal Code: 98115-6349 Contact Voice Telephone: (206) 526-6944 Contact Facsimile Telephone: (206) 526-6329 Contact Electronic Mail Address: Jill.Petersen@noaa.gov Metadata Standard Name: Content Standards for Digital Geospatial Metadata Metadata Standard Version: FGDC-STD-001-1998

Generated by mp version 2.7.23 on Fri May 17 13:10:04 2002

Aleutian Islands Coastal Resources Inventory and Environmental Sensitivity Maps: ESI (Environmental Sensitivity Index Shoreline Types – Polygons and Lines)

Metadata also available as - [Parseable text] - [SGML]

Metadata:

- Identification Information
- Data Quality Information
- Spatial Data Organization Information
- Spatial Reference Information
- Entity_and_Attribute_Information
- Distribution Information
- Metadata Reference Information

Identification Information:

Citation:

Citation Information:

Originator:

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Prince William Sound Oil Spill Recovery Institute; Aleutians West Coastal Resource Service Area (CRSA); Aleutians East Borough; Alaska Chadux Corporation; United States Coast Guard; and National Fish & Wildlife Foundation.

Publication Date: 200205

Title.

Aleutian Islands Coastal Resources Inventory and Environmental Sensitivity Maps: ESI (Environmental Sensitivity Index Shoreline Types – Polygons and Lines)

Edition: First

Geospatial_Data_Presentation_Form: Digital vector data

 $Series_Information:$

Series Name: None

Issue Identification: Aleutian Islands

Publication Information:

Publication Place: Seattle, Washington

Publisher:

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington

Other Citation Details:

Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Prince William Sound Oil Spill Recovery Institute; Aleutians West Coastal Resource Service Area (CRSA); Aleutians East Borough; Alaska Chadux Corporation; United States Coast Guard; and National Fish & Wildlife Foundation.

Description:

Abstract:

This data set contains vector lines and polygons representing the shoreline and coastal habitats of the Aleutian Islands classified according to the Environmental Sensitivity Index (ESI) classification system. This data set comprises a portion of the ESI data for Aleutians East Borough and Aleutians West Coastal Resource Service Area (CRSA). These data identify the marine and coastal environments and wildlife. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources.

Purpose:

The ESI data were collected, mapped, and digitized to provide environmental data for oil spill planning and response. The Clean Water Act with amendments by the Oil Pollution Act of 1990 requires response plans for immediate and effective protection of sensitive resources.

Time_Period_of_Content:

Time Period Information:

Range_of_Dates/Times:

Beginning_Date: 2000 Ending Date: 2001

Currentness Reference:

These data were compiled during 2000-2001. The currentness dates for these data range from 1982 to 2001 and are

documented in the Source_Information section.

Status:

Progress: Complete

Maintenance and Update Frequency: None Scheduled

Spatial Domain:

Bounding Coordinates:

West_Bounding_Coordinate: 172.42000 East_Bounding_Coordinate: -158.81002 North_Bounding_Coordinate: 58.133120 South_Bounding_Coordinate: 48.351629

Keywords:

Theme:

Theme Keyword Thesaurus: None

Theme Keyword: ESI

Theme_Keyword: Sensitivity maps Theme_Keyword: Coastal resources Theme_Keyword: Oil spill planning

Theme_Keyword: Coastal Zone Management

Theme Keyword: Wildlife

Place:

Place_Keyword_Thesaurus: None Place Keyword: Aleutian Islands

Access Constraints: None

Use Constraints:

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

Browse Graphic:

Browse_Graphic_File_Name: datafig.jpg Browse Graphic File Description:

Relationships between spatial data layers and attribute data tables for the Aleutian Islands ESI data.

Browse Graphic File Type: JPEG

Data Set Credit:

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Prince William Sound Oil Spill Recovery Institute; Aleutians West Coastal Resource Service Area (CRSA); Aleutians East Borough; Alaska Chadux Corporation; United States Coast Guard; and National Fish & Wildlife Foundation.

Native Data Set Environment:

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.0.2) and ORACLE(r) RDBMS (version 8.0.5.0.0). The hardware configuration is Hewlett Packard workstations (models 715/50 and 712/80i) with UNIX operating system (HP-UX Release A.10.20), and PC's with Windows Operating System (NT4.0/2000). The Spatial_Data_Organization Information section refers only to the source files in the ARC export format. The following files are included in that data set: birds.e00, bio_lut.e00, biofile.e00, biores.e00, breed.e00, breed_dt.e00, esi.e00, faults.e00, fishl.e00, geo.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, m_mampt.e00, mgt.e00, nests.e00, seasonal.e00, soc_dat.e00, soc_lut.e00, socecon.e00, sources.e00, species.e00, status.e00, volcanos.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biofile, biores, breed_dt, seasonal, soc_dat, soc_lut, socecon, sources, species, and status.

Data Quality Information:

Attribute Accuracy:

Attribute Accuracy Report:

A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.

Logical Consistency Report:

A multi-stage error checking process, described in the above Attribute_Accuracy_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary node, etc.), and ORACLE(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks.

Completeness Report:

These data represent coastal shorelines and habitats classified according to the Environmental Sensitivity Index (ESI) classification system.

Positional Accuracy:

Horizontal Positional Accuracy:

Horizontal Positional Accuracy Report:

Title:

Publication Information:

The ESI data set was developed from pre-existing digital sources and reflects the positional accuracy of these original data. The horizontal positional accuracy of the 1:63,360 USGS topographic quads should conform to National Map Accuracy Standards at scales of 1:63,360. The minimum mapping unit (MMU) of the actual shoreline classification segments is estimated at 50 meters when mapping is conducted using 1:63,360 hardcopy fieldmaps. Field verification has shown that the absolute positional accuracy of breaks between shoreline ESI types with a 95-percent error bound is approximately 58 meters. See the Lineage and Process_Description sections for more information on the original source data and how these data were integrated or manipulated to create the final data set

Sensitivity of Coastal Environments and Wildlife to Spilled Oil, Southern Alaska Peninsula

Lineage:

```
create the final data set.
Source_Information:
      Source Citation:
             Citation Information:
                    Originator: Colin Plank
                    Publication Date: Unpublished material
                    Title: ESI Overflight
                    Geospatial Data Presentation Form: Hardcopy Map
      Source Scale Denominator: 63360
      Type of Source Media: Paper
      Source Time_Period_of_Content:
             Time Period Information:
                    Single Date/Time:
                          Calendar Date: 2000
             Source Currentness Reference: Date of overflight
      Source Citation Abbreviation: None
      Source Contribution: Digital Shoreline
Source Information:
      Source Citation:
             Citation Information:
                    Originator: Research Planning Institute, Inc.
                    Publication Date: 1982
                          Sensitivity of Coastal Environments and Wildlife to Spilled Oil, Bristol Bay Region
                    Geospatial Data Presentation Form: Hardcopy Map
                    Publication Information:
                          Publication Place: Columbia, SC
                          Publisher: RPI. Inc.
      Source Scale Denominator: Varies
      Type_of_Source Media: Paper
      Source Time Period of Content:
             \overline{T}ime \overline{P}eriod \overline{I}nf\overline{O}rmation:
                    Single Date/Time:
                          Calendar Date: 1982
             Source Currentness Reference: Date of study
      Source Citation Abbreviation: None
      Source Contribution: Environmental Sensitivity Index Information
Source Information:
      Source Citation:
             Citation Information:
                    Originator: Research Planning Institute, Inc.
                    Publication Date: 1986
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Geospatial Data Presentation Form: Hardcopy Map

Publication_Place: Columbia, SC

Publisher: RPI, Inc.

Source_Scale_Denominator: Varies Type of Source Media: Paper

Source Time Period of Content:

Time_Period_Information:

 $Single_Date/Time:$

Calendar_Date: 1986

Source Currentness Reference: Date of study

Source_Citation_Abbreviation: None

Source Contribution: Environmental Sensitivity Index Information

Source_Information:
Source_Citation:

Citation Information:

Originator: U.S. Geological Survey

Publication_Date: 1982 Title: Digital Line Graphs

Geospatial Data Presentation Form: Hardcopy Map

Publication Information:

Publication Place: Columbia, SC

Publisher: Alaska Department of Fish and Game

Source_Scale_Denominator: Varies
Type_of_Source_Media: Paper
Source_Time_Period_of_Content:
 Time_Period_Information:
 Single_Date/Time:

Calendar Date: 1982

Source Currentness Reference: Date of study

Source Citation Abbreviation: None

Source Contribution: Environmental Sensitivity Index Information

Process Step:

Process Description:

The intertidal habitats of the Aleutians East Borough were mapped using the ESI shoreline ranking scheme outlined below. In a typical ESI survey, a combination of observational scales is employed. Prior to overflights, existing aerial photos and 1:63,360 topographic maps are examined and parameters such as tidal regime, wave energy, and long-shore sediment transport are assessed through interpretation of coastal landforms by an experienced coastal geologist. If possible, modifications to the digital shoreline to be used in the project are made at this time. Overflights are then conducted, flying at altitudes ranging from 300 to 600 ft. and speeds of 80 knots. The timing of any ESI overflight is dependent upon the timing of the spring low tides. During a five-hour interval of time centered on the peak low tide, a portion of the coast is flown and categorized in the terms of the ESI scale. Mapping only during this interval of time ensures the proper delineation of tidal flats and allows the maximum amount of the intertidal zone to be exposed and evaluated. ESI classifications are denoted directly onto 1:63,360 U.S. Geological Survey (USGS) maps. Additionally, small changes in the shoreline, such as inlet positions or new man-made structures, are drawn onto the basemaps. The final component of an ESI survey is the ground verification of the classifications made during overflights. Depending on logistics, representative examples of each ESI category are surveyed on the ground. The maps used in the field are then digitized by teams of geographers, and the digital shoreline is updated to reflect the observations made during the survey. For the Aleutians East atlas, the ESI shoreline types from the existing hardcopy ESI atlases of Bristol Bay and the southern Alaska Peninsula, which were produced in the 1980s, were digitized and integrated with a newly acquired biological database. The intertidal habitats of the Aleutians West Coastal Resource Service Area (CRSA) were mapped using two systems: (1) the ESI shoreline ranking scheme, and (2) the Coastal Habitats shoreline ranking scheme. The shoreline of Unalaska Island was classified using the ESI ranking system during overflights conducted by an experienced coastal geologist on 30 June-3 July 2000. In the course of a typical ESI survey, a combination of observational scales is employed. Prior to overflights, existing aerial photos and 1:63,360 topographic maps are examined and parameters such as tidal regime, wave energy, and long-shore sediment transport are assessed through interpretation of coastal landforms by a coastal geologist. If possible, modifications to the digital shoreline to be used in the project are made at this time. Overflights are then conducted, flying at altitudes ranging from 300 to 600 ft. and speeds of 80 knots. The timing of any ESI overflight is solely dependent upon the timing of the spring low tides. During a five-hour interval of time centered on the peak low tide, a portion of the coast is flown and categorized in the terms of the ESI scale. Mapping only during this interval of time ensures the proper delineation of tidal flats and allows the maximum amount of the intertidal zone to be exposed and evaluated. ESI classifications are denoted directly onto 1:63,360 U.S. Geological Survey (USGS) maps. Additionally, small changes in the shoreline, such as inlet positions or new man-made structures, are drawn onto the basemaps. The final component of an ESI survey is the ground verification of the classifications made during overflights. Depending on logistics, representative examples of each ESI category are surveyed on the ground. In the case of Unalaska, ground-truthing locations included: the north shore of Beaver Inlet near Ugadaga bay; Summer Bay; Iliuliuk Bay; Dutch Harbor; the

northern and eastern shores of Amaknak Island, and Captains Bay. The maps used in the field are then digitized by teams of geographers and the digital shoreline is updated to reflect the observations made during the survey. The shorelines of all other islands in the Aleutians West CRSA, from Attu to Umnak, were mapped at a scale of 1:250,000 by the same coastal geologist using the more general Coastal Habitat classification system. Overflights of these islands were not conducted, hence the separate mapping scheme. While interest remains high in conducting traditional field-oriented ESI surveys for these islands, budget considerations and logistical factors such as fuel staging, a short field season, habitation, and helicopter availability must be addressed. The mapping done in the Coastal Habitat classification scheme is based on field experience gained in the Unalaska mapping effort, National Imaging and Mapping Agency (NIMA) 1:250,000 topographic maps, USGS bulletin series 1028 (1951-1971) and local expertise. These classifications are not field checked. The categories in the Coastal Habitat scheme are similar to those included in the previous Aleutians West CRSA Resource Inventory atlas. However, the Coastal Habitat scheme improves on the previous work in that individual beaches are mapped as distinct coastal habitats.

Institute coastal habitats.

Process_Date: 200111

Process_Contact:

Contact_Information:

Contact_Organization_Primary:

Contact_Person: Jill Petersen

Contact_Address:

Address_Type: Physical address

Address: 7600 Sand Point Way, N.E.

City: Seattle

State_or_Province: Washington

Postal_Code: 98115-6349

Contact_Voice_Telephone: (206) 526-6944

Contact_Facsimile_Telephone: (206) 526-6329

Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov

```
Spatial Data Organization Information:
      Direct Spatial Reference Method: Vector
      Point_and_Vector Object Information:
            SDTS Terms Description:
                  SDTS Point and Vector Object Type: GT-polygon composed of rings
                  Point and Vector Object Count: 1635
            SDTS Terms Description:
                  SDTS Point and Vector Object Type: Area point
                  Point and Vector Object Count: 1635
            SDTS Terms Description:
                  SDTS Point and Vector Object Type: Complete chain
                  Point and Vector Object Count: 10154
            SDTS Terms Description:
                  SDTS Point and Vector Object Type: Link
                  Point and Vector Object Count: 562722
            SDTS Terms Description:
                  SDTS Point and Vector Object Type: Node, planar graph
                  Point and Vector Object Count: 9623
```

```
Spatial_Reference_Information:
    Horizontal_Coordinate_System_Definition:
    Geographic:
    Latitude_Resolution: 0.00005
    Longitude_Resolution: 0.00005
    Geographic_Coordinate_Units: Decimal degrees
    Geodetic_Model:
    Horizontal_Datum_Name: North American Datum of 1927
    Ellipsoid_Name: Clark 1866
    Semi-major_Axis: 6378206.4
    Denominator of Flattening Ratio: 294.978698
```

```
Entity_and_Attribute_Information:
```

Detailed_Description:

Entity Type:

Entity Type Label: ESI.AAT

Entity_Type_Definition:

The ESI.AAT table contains attribute information for the vector lines representing linear shoreline features with ESI classification.

Entity_Type_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: ESI Attribute_Definition:

The item ESI contains values representing the ESI shoreline type. In many cases shorelines are ranked with multiple codes, such as "6B/3A" (listed landward to seaward from left to right). The first code, "6B", is the most landward shoreline type and the second code, "3A", is the shoreline type closest to the water. Singular shoreline types are listed below. No multiple codes are listed, but all multiple codes included in the data set can be assembled from the codes described. The ESI code definition changes based on the associated ENVIR item code. For example, the definition of a line with an ESI of "4" and an ENVIR code of "E" (for Estuarine) is "Coarse-grained sand beaches", while the definition of a line with an ESI of "4" and an ENVIR code of "C" (for Coastal Habitat) is "Exposed tidal flats". The Coastal Habitat mapping scheme is based on the same factors and principles as the ESI mapping system; however, because it is not a field survey based mapping scheme, it provides less resolution. It should be noted that the Coastal Habitat mapping scheme is for estuarine environments. For each ESI code definition below, the associated ENVIR code is referenced in parentheses. The ESI rankings progress from low to high susceptibility to oil spills. To determine the sensitivity of a particular intertidal shoreline habitat, the following factors are integrated: 1) Shoreline type (substrate, grain size, tidal elevation, origin); 2) Exposure to wave and tidal energy; 3) Biological productivity and sensitivity; 4) Ease of cleanup. Prediction of the behavior and persistence of oil in intertidal habitats is based on an understanding of the dynamics of the coastal environments, not just the substrate type and grain size. The intensity of energy expended upon a shoreline by wave action, tidal currents, and river currents directly affects the persistence of stranded oil. The need for shoreline cleanup activities is determined, in part, by the slowness of natural processes in removal of oil stranded on the shoreline. The potential for biological injury, and ease of cleanup of spilled oil are also important factors in the ESI ranking. Generally speaking, areas exposed to high levels of physical energy, such as wave action and tidal currents, and low biological activity rank low on the scale, whereas sheltered areas with associated high biological activity have the highest ranking.

Attribute Definition Source: Research Planning, Inc.

 $Attribute_Domain_Values:$

Enumerated Domain:

Enumerated_Domain_Value: 1

Enumerated Domain Value Definition:

Exposed Rocky Shores With or Without Wave-Cut Platform (Coastal Habitat)

Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain:

Enumerated Domain Value: 1A

Enumerated Domain Value Definition: Exposed Rocky Cliffs (Estuarine)

Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain:

Enumerated Domain Value: 1B

Enumerated Domain Value Definition: Exposed, Solid Man-made Structures (Estuarine)

Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain:

Enumerated_Domain_Value: 2

 $Enumerated_Domain_Value_Definition:$

Exposed High Energy Shoreline (unidentified cliffs, platforms, and beaches) (Coastal Habitat)

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated Domain:

Enumerated Domain Value: 2A

Enumerated_Domain_Value_Definition: Rocky Shoals; Bedrock Ledges (Estuarine)

Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain:

Enumerated Domain_Value: 3

Enumerated Domain Value Definition:

Beaches (fine and medium sand, coarse sand, sand and gravel, gravel) (Coastal Habitat)

Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain:

Enumerated_Domain_Value: 3A

Enumerated Domain Value Definition: Fine- to Medium-grained Sand Beaches (Estuarine)

Enumerated Domain Value Definition Source: Research Planning, Inc.

```
Enumerated Domain:
                  Enumerated Domain Value: 4
                  Enumerated Domain Value Definition:
                        Coarse-Grained Sand Beaches (Estuarine); Exposed Tidal Flats (Coastal Habitat)
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
            Enumerated Domain:
                  Enumerated Domain Value: 5
                  Enumerated Domain Value Definition:
                        Mixed Sand and Gravel Bars and Gently Sloping Banks (Estuarine); Estuarine Vegetation and
                        Sheltered Coast (Coastal Habitat)
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
            Enumerated Domain:
                  Enumerated Domain Value: 6A
                  Enumerated Domain Value Definition: Gravel Beaches and Gently Sloping Banks (Estuarine)
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
            Enumerated Domain:
                  Enumerated Domain Value: 6B
                  Enumerated Domain Value Definition: Riprap (Estuarine)
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
            Enumerated Domain:
                  Enumerated Domain Value: 7
                  Enumerated Domain Value Definition: Exposed Tidal Flats (Estuarine)
                  Enumerated Domain Value_Definition_Source: Research Planning, Inc.
            Enumerated Domain:
                  Enumerated Domain Value: 8A
                  Enumerated Domain Value Definition: Sheltered Rocky Shores (Estuarine)
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
            Enumerated Domain:
                  Enumerated Domain Value: 8B
                  Enumerated Domain Value Definition: Sheltered, Solid Man-made Structures (Estuarine)
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
            Enumerated Domain:
                  Enumerated Domain Value: 8C
                  Enumerated Domain Value Definition: Sheltered Riprap (Estuarine)
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
            Enumerated Domain:
                  Enumerated Domain Value: 9A
                  Enumerated Domain Value Definition: Sheltered Tidal Flats (Estuarine)
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
            Enumerated Domain:
                  Enumerated Domain Value: 9B
                  Enumerated Domain Value Definition: Vegetated Low Banks (Estuarine)
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
            Enumerated Domain:
                  Enumerated Domain Value: 10A
                  Enumerated Domain Value Definition: Salt- and Brackish-water Marsh (Estuarine)
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
            Enumerated Domain:
                  Enumerated Domain Value: U
                  Enumerated Domain Value Definition: Unranked
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: LINE
      Attribute Definition: Type of geographic feature.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: F
                  Enumerated Domain Value Definition: Flat
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
            Enumerated Domain:
                  Enumerated Domain Value: H
                  Enumerated Domain Value Definition: Hydrography
                  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
            Enumerated Domain:
```

```
Enumerated Domain Value: M
                         Enumerated Domain Value Definition: Marsh
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
                  Enumerated Domain:
                         Enumerated Domain Value: S
                         Enumerated Domain Value Definition: Shoreline
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: SOURCE_ID
            Attribute Definition: Data source of the ESI arcs
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                  Enumerated Domain:
                         Enumerated Domain Value: 1
                         Enumerated Domain Value Definition: Original digital information (Alaska DNR)
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
                  Enumerated Domain:
                         Enumerated Domain Value: 2
                         Enumerated Domain Value Definition: Low-altitude overflights by Research Planning, Inc.
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
                  Enumerated Domain:
                         Enumerated Domain Value: 5
                         Enumerated Domain Value Definition: Digitized from 1:63,360-USGS topographic quadrangle
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
                  Enumerated Domain:
                         Enumerated Domain Value: 8
                         Enumerated Domain Value Definition: USGS DLG's
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
                  Enumerated Domain:
                         Enumerated Domain Value: 9
                         Enumerated Domain Value Definition: Digitized from Bristol Bay ESI Atlas
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
                  Enumerated Domain:
                         Enumerated Domain Value: 10
                         Enumerated Domain Value Definition: Digitized from S. Alaska Peninsula ESI Atlas
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: ENVIR
            Attribute Definition: Type of regional environment
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                  Enumerated Domain:
                         Enumerated Domain Value: E
                         Enumerated Domain Value Definition: Estuarine
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
                  Enumerated Domain:
                         Enumerated Domain Value: C
                         Enumerated Domain Value Definition: Coastal Habitat
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
                  Enumerated Domain:
                         Enumerated Domain Value: U
                         Enumerated Domain Value Definition: Unranked
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
Detailed Description:
      Entity Type:
            Entity Type Label: ESI.PAT
            Entity Type Definition:
                   The ESI.PAT table contains attribute information for the vector polygons representing polygonal features with
                  ESI classification.
            Entity Type Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: ESI
            Attribute Definition:
                   The item ESI contains values representing the ESI polygon type. The ESI rankings progress from low to high
                   susceptibility to oil spills. The ESI rankings of polygons are similar to the ESI rankings of shorelines (see the
```

```
ESI attribute in the ESI.AAT section). For each ESI code definition below, the associated ENVIR code is
                        referenced in parentheses.
                  Attribute_Definition_Source: Research Planning, Inc.
                  Attribute Domain Values:
                        Enumerated Domain:
                               Enumerated Domain Value: 2A
                               Enumerated Domain Value Definition: Exposed Wave-cut Platforms in Bedrock (Estuarine)
                               Enumerated Domain Value Definition Source: Research Planning, Inc.
                        Enumerated Domain:
                               Enumerated Domain Value: 7
                               Enumerated Domain Value Definition: Exposed Tidal Flats (Estuarine)
                               Enumerated Domain Value Definition Source: Research Planning, Inc.
                        Enumerated Domain:
                               Enumerated Domain Value: 9A
                               Enumerated Domain Value Definition: Sheltered Tidal Flats (Estuarine)
                               Enumerated Domain Value Definition Source: Research Planning, Inc.
                        Enumerated Domain:
                               Enumerated Domain Value: 10A
                               Enumerated Domain Value Definition: Salt- and Brackish-water Marsh (Estuarine)
                               Enumerated Domain Value Definition Source: Research Planning, Inc.
                        Enumerated Domain:
                               Enumerated Domain Value: U
                               Enumerated Domain Value Definition: Unranked
                               Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute:
                  Attribute Label: WATER_CODE
                  Attribute Definition: Specifies a polygon as either water or land
                  Attribute Definition Source: Research Planning, Inc.
                  Attribute Domain Values:
                        Enumerated Domain:
                               Enumerated Domain Value: L
                               Enumerated Domain Value Definition: Land
                               Enumerated Domain Value Definition Source: Research Planning, Inc.
                        Enumerated Domain:
                               Enumerated Domain Value: W
                               Enumerated Domain Value Definition: Water
                               Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute:
                  Attribute Label: ENVIR
                  Attribute Definition: Type of regional environment
                  Attribute Definition Source: Research Planning, Inc.
                  Attribute Domain Values:
                        Enumerated Domain:
                               Enumerated Domain Value: E
                               Enumerated Domain Value Definition: Estuarine
                               Enumerated Domain Value Definition Source: Research Planning, Inc.
                        Enumerated Domain:
                               Enumerated Domain Value: U
                               Enumerated Domain Value Definition: Unranked
                               Enumerated Domain Value Definition Source: Research Planning, Inc.
Distribution Information:
      Distributor:
            Contact Information:
                  Contact Person Primary:
                        Contact Person: John Kaperick
                        Contact Organization: NOAA, Office of Response and Restoration
                  Contact Address:
```

Address_Type: Physical Address Address: 7600 Sand Point Way, N.E.

State_or_Province: Washington Postal Code: 98115-6349

City: Seattle

Contact_Voice_Telephone: (206) 526-6400 Contact_Facsimile_Telephone: (206) 526-6329

Resource_Description: ESI Atlas for the Aleutian Islands

Distribution Liability:

Although these data have been processed successfully on a computer system at the National Oceanic and Atmospheric Administration, no warranty, expressed or implied, is made by NOAA regarding the utility of the data on any other system, nor shall the act of distribution constitute any such warranty. NOAA warrants the delivery of this product in computer-readable format, and will offer a replacement copy of the product when the product is determined unreadable by computer-input peripherals, or when the physical medium is delivered in damaged condition.

Custom Order Process:

Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to a wider community of GIS/mapping users. Distribution formats include ARC export, MOSS and Shape files, and MARPLOT map folders. An ArcView ESI project and ESI_Viewer product are also included on the distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

Metadata_Reference_Information:
Metadata_Date: 200205

Metadata Review Date: 200205

Metadata_Contact:

Contact Information:

Contact Person Primary:

Contact Person: Jill Petersen

Contact Organization: NOAA, Office of Response and Restoration

Contact Position: GIS Manager

Contact Address:

Address_Type: Physical Address Address: 7600 Sand Point Way, N.E.

City: Seattle

State_or_Province: Washington Postal Code: 98115-6349

Contact_Voice_Telephone: (206) 526-6944 Contact_Facsimile_Telephone: (206) 526-6329

Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov

Metadata Standard Name: Content Standards for Digital Geospatial Metadata

Metadata Standard Version: FGDC-STD-001-1998

Generated by mp version 2.7.23 on Wed May 22 10:43:47 2002

Aleutian Islands Coastal Resources Inventory and Environmental Sensitivity Maps: INDEX (Index Polygons)

Metadata also available as - [Parseable text] - [SGML]

Metadata:

- Identification Information
- Data Quality Information
- Spatial Data Organization Information
- Spatial Reference Information
- Entity and Attribute Information
- <u>Distribution Information</u>
- Metadata Reference Information

Identification Information:

Citation:

Citation Information:

Originator:

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Prince William Sound Oil Spill Recovery Institute; Aleutians West Coastal Resource Service Area (CRSA); Aleutians East Borough; Alaska Chadux Corporation; United States Coast Guard; and National Fish & Wildlife Foundation.

Publication Date: 200205

Title:

Aleutian Islands Coastal Resources Inventory and Environmental Sensitivity Maps: INDEX (Index Polygons)

Edition: First

Geospatial_Data_Presentation_Form: Digital vector data

Series Information:

Series Name: None

Issue Identification: Aleutian Islands

Publication Information:

Publication_Place: Seattle, Washington

Publisher:

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington

 $Other_Citation_Details:$

Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Prince William Sound Oil Spill Recovery Institute; Aleutians West Coastal Resource Service Area (CRSA); Aleutians East Borough; Alaska Chadux Corporation; United States Coast Guard; and National Fish & Wildlife Foundation.

Description:

Abstract:

This data set contains vector polygons representing the boundaries of the U.S. Geological Survey 1:63,360 and 1:250,000 topographic maps and other map and digital data boundaries used in the creation of the Environmental Sensitivity Index (ESI) for the Aleutian Islands. This data set comprises a portion of the ESI data for Aleutians East Borough and Aleutians West Coastal Resource Service Area (CRSA). These data identify the marine and coastal environments and wildlife. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources.

Purpose:

The ESI data were collected, mapped, and digitized to provide environmental data for oil spill planning and response. The Clean Water Act with amendments by the Oil Pollution Act of 1990 requires response plans for immediate and effective protection of sensitive resources.

Time_Period_of_Content:

Time Period Information:

Range of Dates/Times:

Beginning_Date: 2000 Ending_Date: 2001

Currentness_Reference:

These data were compiled during 2000-2001. The currentness date for these data is 2001 and is documented in the Source Information section.

Status:

Progress: Complete

Maintenance and Update Frequency: None Scheduled

Spatial Domain:

Bounding Coordinates:

West_Bounding_Coordinate: 172.42000 East_Bounding_Coordinate: -158.81002 North_Bounding_Coordinate: 58.133120 South Bounding_Coordinate: 48.351629

Keywords:

Theme:

Theme Keyword Thesaurus: None

Theme Keyword: ESI

Theme_Keyword: Sensitivity maps Theme_Keyword: Coastal resources Theme_Keyword: Oil spill planning

Theme Keyword: Coastal Zone Management

Theme Keyword: Wildlife

Place:

Place_Keyword_Thesaurus: None Place Keyword: Aleutian Islands

Access Constraints: None

Use_Constraints:

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

Browse Graphic:

Browse_Graphic_File_Name: datafig.jpg Browse Graphic File Description:

Relationships between spatial data layers and attribute data tables for the Aleutian Islands ESI data.

Browse Graphic File Type: JPEG

Data_Set Credit:

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Prince William Sound Oil Spill Recovery Institute; Aleutians West Coastal Resource Service Area (CRSA); Aleutians East Borough; Alaska Chadux Corporation; United States Coast Guard; and National Fish & Wildlife Foundation.

Native_Data_Set_Environment:

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.0.2) and ORACLE(r) RDBMS (version 8.0.5.0.0). The hardware configuration is Hewlett Packard workstations (models 715/50 and 712/80i) with UNIX operating system (HP-UX Release A.10.20), and PC's with Windows Operating System (NT4.0/2000). The Spatial_Data_Organization Information section refers only to the source files in the ARC export format. The following files are included in that data set: birds.e00, bio_lut.e00, biofile.e00, biores.e00, breed_e00, breed_dt.e00, esi.e00, faults.e00, fish.e00, fishl.e00, geo.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, m_mampt.e00, mgt.e00, nests.e00, seasonal.e00, soc_dat.e00, soc_lut.e00, socecon.e00, sources.e00, species.e00, status.e00, volcanos.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biofile, biores, breed_dt, seasonal, soc_dat, soc_lut, socecon, sources, species, and status.

Data_Quality_Information:

Attribute Accuracy:

Attribute_Accuracy_Report:

A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.

Logical Consistency Report:

A multi-stage error checking process, described in the above Attribute_Accuracy_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary node, etc.), and ORACLE(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected

to a number of quality and consistency checks.

Completeness Report:

These data represent the boundaries of all the hardcopy cartographic products produced as part of the Environmental Sensitivity Index (ESI) for the Aleutian Islands, as well as digital data extents. Primarily, 1:63,360 and 1:250,000 USGS topographic maps were used to provide boundaries for cartographic products. In some cases, the polygons represent U.S. Geological Survey (USGS) topographic maps that were re-tiled, moved, or extended to provide better cartographic coverage of the study area. Finally, polygons representing the outer extent of all digital data are included in this data layer.

Positional Accuracy:

Horizontal Positional Accuracy:

Horizontal_Positional_Accuracy_Report:

The index polygons in this data layer were generated in Arc/INFO from the coordinates of the USGS 1:63,360 and 1:250,000 topographic map corners. Some small amount of positional error may be present along the arcs forming the boundaries of these polygons, particularly away from the polygon corners. Some boundaries were developed from pre-existing digital and hardcopy sources and reflect the positional accuracy of these original data. See the Lineage and Process_Description sections for more information on the original source data and how these data were integrated or manipulated to create the final data set.

Lineage:

Source Information:

Source Citation:

Citation Information:

Originator: US Geological Survey Publication_Date: Unknown Title: Topographic Quadrangles

Geospatial_Data_Presentation_Form: Map

Publication Information:

Publication_Place: Denver, CO or Reston, VA

Publisher: U.S. Geological Survey

Source_Scale_Denominator: 63360
Type_of_Source_Media: Paper
Source_Time_Period_of_Content:
 Time_Period_Information:
 Single_Date/Time:

Calendar Date: Varies

Source Currentness Reference: Date of publication

Source_Citation_Abbreviation: None Source_Contribution: Map index

Process Step:

Process_Description:

The index polygons in this data layer were generated in Arc/INFO from the coordinates of the USGS map corners, or appropriate coordinates.

Process_Date: 200111
Process Contact:

Contact Information:

Contact_Organization_Primary:

Contact Organization: NOAA, Office of Response and Restoration

Contact_Person: Jill Petersen

Contact Address:

Address_Type: Physical address Address: 7600 Sand Point Way, N.E.

City: Seattle

State_or_Province: Washington

Postal Code: 98115-6349

Contact_Voice_Telephone: (206) 526-6944 Contact Facsimile Telephone: (206) 526-6329

Contact Electronic Mail Address: Jill.Petersen@noaa.gov

Spatial Data Organization Information:

Direct_Spatial_Reference_Method: Vector

Point and Vector Object Information:

SDTS Terms Description:

SDTS Point and Vector Object Type: GT-polygon composed of rings

Point and Vector Object Count: 27

SDTS Terms Description:

SDTS Point and Vector Object Type: Area point

Point and Vector Object Count: 27

SDTS_Terms_Description:

```
SDTS Terms Description:
                  SDTS Point and Vector Object Type: Link
                  Point and Vector Object Count: 19073
            SDTS Terms Description:
                  SDTS Point and Vector Object Type: Node, planar graph
                  Point and Vector Object Count: 99
Spatial Reference Information:
      Horizontal Coordinate System Definition:
            Geographic:
                  Latitude Resolution: 0.00005
                  Longitude Resolution: 0.00005
                  Geographic Coordinate Units: Decimal degrees
            Geodetic Model:
                  Horizontal Datum Name: North American Datum of 1927
                  Ellipsoid Name: Clark 1866
                  Semi-major Axis: 6378206.4
                  Denominator of Flattening Ratio: 294.978698
Entity and Attribute Information:
      Detailed Description:
            Entity Type:
                  Entity Type Label: INDEX.PAT
                  Entity Type Definition:
                        The INDEX.PAT table contains attribute information for the vector polygons representing the boundaries of
                        the USGS 1:63,360 and 1:250,000 topographic maps and other map and digital data boundaries used in the
                        creation of the Environmental Sensitivity Index (ESI) for the Aleutian Islands.
                  Entity Type Definition Source: Research Planning, Inc.
            Attribute:
                  Attribute Label: TILE-NAME
                  Attribute Definition:
                        The TILE-NAME contains the map number according to the specified layout of the atlas. The values for each
                        polygon are unique and range from 1 through 24.
                  Attribute Definition Source: Research Planning, Inc.
                  Attribute Domain Values:
                        Range Domain:
                               Range Domain Minimum: 1
                               Range Domain Maximum: 24
            Attribute:
                  Attribute Label: TOPO-NAME
                  Attribute Definition: Topographic map names
                  Attribute Definition Source: Research Planning, Inc.
                  Attribute Domain Values:
                        Enumerated Domain:
                               Enumerated Domain Value: ADAK, AK (1983); ATKA, AK (1983); SEGUAM, AK (1983)
                               Enumerated Domain Value Definition: USGS 1:250,000 Topographic map name
                               Enumerated Domain Value Definition Source: Research Planning, Inc.
                        Enumerated Domain:
                               Enumerated Domain Value: AMUKTA, AK (1983); SAMALGA ISLAND, AK (1983); UMNAK, AK
                               Enumerated Domain Value Definition: USGS 1:250,000 Topographic map name
                               Enumerated Domain Value Definition Source: Research Planning, Inc.
                        Enumerated Domain:
                               Enumerated Domain Value: ATTU, AK (1983)
                               Enumerated Domain Value Definition: USGS 1:250,000 Topographic map name
                               Enumerated Domain Value Definition Source: Research Planning, Inc.
                        Enumerated Domain:
                               Enumerated Domain Value: CHIGNIK, AK (1993); PORT MOLLER, AK (1988)
                               Enumerated Domain Value Definition: USGS 1:63,360 Topographic map name
                               Enumerated Domain Value Definition Source: Research Planning, Inc.
                        Enumerated Domain:
```

SDTS Point and Vector Object Type: Complete chain

Point and Vector Object Count: 123

```
Aleutian Islands Coastal Resources Inventory and
      Enumerated Domain Value: COLD BAY, AK (1975)
      Enumerated Domain Value Definition: USGS 1:63,360 Topographic map name
      Enumerated Domain Value Definition Source: Research Planning, Inc.
Enumerated Domain:
      Enumerated Domain Value: COLD BAY, AK (1975); PORT MOLLER, AK (1988)
      Enumerated Domain Value Definition: USGS 1:63,360 Topographic map name
      Enumerated Domain Value Definition Source: Research Planning, Inc.
Enumerated Domain:
      Enumerated Domain Value: FALSE PASS, AK (1970)
      Enumerated Domain Value Definition: USGS 1:63,360 Topographic map name
      Enumerated Domain Value Definition Source: Research Planning, Inc.
Enumerated Domain:
      Enumerated Domain Value: GARELOI ISLAND, AK (1983); ADAK, AK (1983)
      Enumerated Domain Value Definition: USGS 1:250,000 Topographic map name
      Enumerated Domain Value Definition Source: Research Planning, Inc.
Enumerated Domain:
      Enumerated Domain Value: KISKA, AK (1983); RAT ISLAND, AK (1983)
      Enumerated Domain Value Definition: USGS 1:250,000 Topographic map name
      Enumerated Domain Value Definition Source: Research Planning, Inc.
Enumerated Domain:
      Enumerated Domain Value: PORT MOLLER, AK (1988); STEPOVAK BAY, AK (1981)
      Enumerated Domain Value Definition: USGS 1:63,360 Topographic map name
      Enumerated Domain Value Definition Source: Research Planning, Inc.
Enumerated Domain:
      Enumerated Domain Value: RAT ISLAND, AK (1983); GARELOI ISLAND, AK (1983)
      Enumerated Domain Value Definition: USGS 1:250,000Topographic map name
      Enumerated Domain Value Definition Source: Research Planning, Inc.
Enumerated Domain:
      Enumerated Domain Value: SEGUAM, AK (1983); AMUKTA, AK (1983)
      Enumerated Domain Value Definition: USGS 1:250,000 Topographic map name
      Enumerated Domain Value Definition Source: Research Planning, Inc.
Enumerated Domain:
      Enumerated Domain Value: SIMEONOF ISLAND, AK (1963); STEPOVAK BAY, AK (1981)
      Enumerated Domain Value Definition: USGS 1:63,360 Topographic map name
      Enumerated Domain Value Definition Source: Research Planning, Inc.
Enumerated Domain:
      Enumerated Domain Value: UNALASKA, AK (1984)
      Enumerated Domain Value Definition: USGS 1:63,360 Topographic map name
      Enumerated Domain Value Definition Source: Research Planning, Inc.
Enumerated Domain:
      Enumerated Domain Value: UNALASKA, AK (1984); UNIMAK, AK (1983)
      Enumerated Domain Value Definition: USGS 1:63,360 Topographic map name
      Enumerated Domain Value Definition Source: Research Planning, Inc.
Enumerated Domain:
      Enumerated Domain Value: UNIMAK, AK (1983)
      Enumerated Domain Value Definition: USGS 1:63,360 Topographic map name
      Enumerated Domain Value Definition Source: Research Planning, Inc.
SCALE contains the value of the denominator of the scale at which the map is plotted in the final map product.
Enumerated Domain:
      Enumerated Domain Value: 250,000
```

Attribute:

```
Attribute Label: SCALE
```

Attribute Definition:

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain Value Definition: Scale = 1:250,000

Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain:

Enumerated Domain Value: 500,000

Enumerated Domain Value Definition: Scale =1:500,000

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: MAPANGLE

Attribute Definition:

MAPANGLE contains a value to rotate the final map product so that it is situated straight up and down Attribute Definition Source: Research Planning, Inc. Attribute Domain Values:

```
Range Domain:
                  Range Domain Minimum: 5.122
                  Range Domain Maximum: 40.202
                  Attribute Units of Measure: Degree
Attribute:
      Attribute Label: PAGESIZE
      Attribute Definition:
            PAGESIZE contains the value of the width and height of the map in the final map product
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: 17,11
                   Enumerated Domain Value Definition: Page size = 11" by 17"
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: CRSA
      Attribute Definition: Designates Coastal Resource Service Area
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: E
                   Enumerated Domain Value Definition: East Coastal Resource Service Area
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
            Enumerated Domain:
                   Enumerated Domain Value: W
                   Enumerated Domain Value Definition: West Coastal Resource Service Area
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: MAP-NUMBER
      Attribute Definition:
            The item MAP-NUMBER contains the map number for the Aleutians atlas. During the map production process,
```

the value of MAP-NUMBER is plotted on the map product to order maps in a coherent manner. The values for each polygon are unique and range from 1 through 13 ('i' indicates inset).

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Range Domain:

Range Domain Minimum: 1 Range Domain Maximum: 13

Distribution Information:

Distributor:

Contact Information:

Contact Person Primary:

Contact Person: John Kaperick

Contact Organization: NOAA, Office of Response and Restoration

Contact Address:

Address Type: Physical Address Address: 7600 Sand Point Way, N.E.

City: Seattle

State or Province: Washington Postal Code: 98115-6349

Contact Voice Telephone: (206) 526-6400 Contact Facsimile Telephone: (206) 526-6329 Resource Description: ESI Atlas for the Aleutian Islands

Distribution Liability:

Although these data have been processed successfully on a computer system at the National Oceanic and Atmospheric Administration, no warranty, expressed or implied, is made by NOAA regarding the utility of the data on any other system, nor shall the act of distribution constitute any such warranty. NOAA warrants the delivery of this product in computer-readable format, and will offer a replacement copy of the product when the product is determined unreadable by computer-input peripherals, or when the physical medium is delivered in damaged condition.

Custom Order Process:

Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to a wider community of GIS/mapping users. Distribution formats include ARC export, MOSS and Shape files, and MARPLOT map folders. An ArcView ESI project and ESI_Viewer product are also included on the distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on

```
Metadata Reference Information:
      Metadata_Date: 200205
      Metadata_Review_Date: 200205
      Metadata_Contact:
             Contact Information:
                    Contact Person Primary:
                          Contact_Person: Jill Petersen
                          Contact_Organization: NOAA, Office of Response and Restoration
                    Contact Position: GIS Manager
                    Contact Address:
                          Address Type: Physical Address
                          Address: 7600 Sand Point Way, N.E.
                          City: Seattle
                          State or Province: Washington
                          Postal Code: 98115-6349
                   Contact_Voice_Telephone: (206) 526-6944
                   Contact_Facsimile_Telephone: (206) 526-6329
Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov
      Metadata Standard Name: Content Standards for Digital Geospatial Metadata
      Metadata Standard Version: FGDC-STD-001-1998
```

Generated by mp version 2.7.23 on Thu May 16 16:15:49 2002

Aleutian Islands Coastal Resources Inventory and Environmental Sensitivity Maps: BIRDS (Bird Polygons)

Metadata also available as - [Parseable text] - [SGML]

Metadata:

- Identification Information
- Data Quality Information
- Spatial Data Organization Information
- Spatial Reference Information
- Entity and Attribute Information
- Distribution Information
- Metadata_Reference_Information

Identification Information:

Citation:

Citation Information:

Originator:

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Prince William Sound Oil Spill Recovery Institute; Aleutians West Coastal Resource Service Area (CRSA); Aleutians East Borough; Alaska Chadux Corporation; United States Coast Guard; and National Fish & Wildlife Foundation.

Publication Date: 200205

Title:

Aleutian Islands Coastal Resources Inventory and Environmental Sensitivity Maps: BIRDS (Bird Polygons)

Edition: First

Geospatial_Data_Presentation_Form: Digital vector data

Series Information:

Series Name: None

Issue Identification: Aleutian Islands

Publication Information:

Publication_Place: Seattle, Washington

Publisher:

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington

Other Citation Details:

Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Prince William Sound Oil Spill Recovery Institute; Aleutians West Coastal Resource Service Area (CRSA); Aleutians East Borough; Alaska Chadux Corporation; United States Coast Guard; and National Fish & Wildlife Foundation.

Description:

Abstract:

This data set contains biological resource data for alcids, shorebirds, waterfowl, diving birds, pelagic birds, gulls and terns in the Aleutian Islands, Alaska. Vector polygons in this data set represent locations of bird nesting, foraging, and rafting sites. Species-specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for Aleutians East Borough and Aleutians West Coastal Resource Service Area (CRSA). These data identify the marine and coastal environments and wildlife. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources. See also the NESTS (Nest Points) data layer, part of the larger Aleutians East/Aleutians West ESI database, for additional bird information.

Purpose:

The ESI data were collected, mapped, and digitized to provide environmental data for oil spill planning and response. The Clean Water Act with amendments by the Oil Pollution Act of 1990 requires response plans for immediate and effective protection of sensitive resources.

Time Period of Content:

Time Period Information:

Range of Dates/Times:

Beginning_Date: 2000 Ending_Date: 2001

Currentness_Reference:

The biological data were compiled during 2000-2001. The currentness dates for these data range from 1982 to 2001 and are documented in the Source_Information section.

Status:

Progress: Complete

Maintenance and Update Frequency: None Scheduled

Spatial Domain:

Bounding Coordinates:

West_Bounding_Coordinate: 172.42000 East_Bounding_Coordinate: -158.81002 North_Bounding_Coordinate: 58.133120 South_Bounding_Coordinate: 48.351629

Keywords:

Theme:

Theme Keyword Thesaurus: None

Theme Keyword: ESI

Theme_Keyword: Sensitivity maps Theme_Keyword: Coastal resources Theme Keyword: Oil spill planning

Theme_Keyword: Coastal Zone Management

Theme_Keyword: Wildlife Theme Keyword: Bird

Place:

Place_Keyword_Thesaurus: None Place Keyword: Aleutian Islands

Access Constraints: None

Use Constraints:

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

Browse Graphic:

Browse_Graphic_File_Name: datafig.jpg Browse Graphic File Description:

Relationships between spatial data layers and attribute data tables for the Aleutian Islands ESI data.

Browse Graphic File Type: JPEG

Data Set Credit:

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Prince William Sound Oil Spill Recovery Institute; Aleutians West Coastal Resource Service Area (CRSA); Aleutians East Borough; Alaska Chadux Corporation; United States Coast Guard; and National Fish & Wildlife Foundation.

Native Data Set Environment:

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.0.2) and ORACLE(r) RDBMS (version 8.0.5.0.0). The hardware configuration is Hewlett Packard workstations (models 715/50 and 712/80i) with UNIX operating system (HP-UX Release A.10.20), and PC's with Windows Operating System (NT4.0/2000). The Spatial_Data_Organization Information section refers only to the source files in the ARC export format. The following files are included in that data set: birds.e00, bio_lut.e00, biofile.e00, biores.e00, breed_e00, breed_dt.e00, esi.e00, faults.e00, fish.e00, fishl.e00, geo.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, m_mampt.e00, mgt.e00, nests.e00, seasonal.e00, soc_dat.e00, soc_lut.e00, socecon.e00, sources.e00, species.e00, status.e00, volcanos.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biofile, biores, breed, breed dt, seasonal, soc_dat, soc_lut, socecon, sources, species, and status.

Data Quality Information:

Attribute Accuracy:

Attribute Accuracy_Report:

A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.

Logical Consistency Report:

A multi-stage error checking process, described in the above Attribute_Accuracy_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency

checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary node, etc.), and ORACLE(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks. In the process of checking for topological and database consistencies, new ID's and RARNUM's or HUNUM's are also generated. The new ID's are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon, a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "resource at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

Completeness Report:

These data represent a synthesis of expert knowledge and available hardcopy reports and digital data on bird nesting, foraging, and rafting concentration areas. Refer to the NESTS (Nest Points) data layer for additional bird nesting information. These data do not necessarily represent all bird occurrences in the Aleutian Islands, Alaska. The following species are included in this data set (Species_ID, Common Name, Scientific Name, if applicable): 1, Common loon, Gavia immer; 11, Tundra (whistling) swan, Cygnus columbianus; 12, Canada goose, Branta canadensis; 13, Brant, Branta bernicla; 16, Mallard, Anas platyrhynchos; 17, Northern pintail, Anas acuta; 18, Green-winged teal, Anas crecca; 20, Northern shoveler, Anas clypeata; 22, Greater scaup, Aythya marila; 24, Common goldeneye, Bucephala clangula; 26, Bufflehead, Bucephala albeola; 27, Oldsquaw, Clangula hyemalis; 28, Harlequin duck, Histrionicus histrionicus; 29, White-winged scoter, Melanitta fusca; 30, Surf scoter, Melanitta perspicillata; 32, Common merganser, Mergus merganser; 33, Red-breasted merganser, Mergus serrator; 36, Glaucous-winged gull, Larus glaucescens; 46, Common murre, Uria aalge; 47, Pigeon guillemot, Cepphus columba; 51, Tufted puffin, Fratercula cirrhata; 68, Black oystercatcher, Haematopus bachmani; 79, Cormorant, Phalacrocorax sp.; 81, Horned puffin, Fratercula corniculata; 103, Common eider, Somateria mollissima; 112, Black guillemot, Cepphus grylle; 157, Emperor goose, Chen canagica; 158, King eider, Somateria spectabilis; 159, Steller's eider, Polysticta stelleri; 161, Rock sandpiper, Calidris ptilocnemis; 162, Gadwall, Anas strepera; 169, American wigeon, Anas americana; 197, Black (common) scoter, Melanitta nigra; 302, Scoters, Melanitta spp.; 1002, Shorebirds; 1003, Waterfowl; 1009, Shearwaters; 1025, Murrelets.

Positional_Accuracy:

Horizontal Positional Accuracy:

Horizontal Positional Accuracy Report:

Most of the spatial components of the biological data sets are developed using regional experts who estimate concentration areas. It is difficult to estimate the positional accuracy of such data, except to state that they are compiled on hardcopy basemaps with a scale of 1:250,000. Some of the spatial components of the biological data sets are developed from pre-existing digital sources and reflect the positional accuracy of these original data. See the Lineage and Process_Description sections for more information on the original data source and how these data were integrated or manipulated to create the final data set. Note that biological resource data by their very nature are considered "fuzzy", and this should be understood when considering the positional accuracy of vector digital objects representing these resources.

Lineage:

```
Source Information:
      Source Citation:
            Citation Information:
                   Originator: Mark Fink, Alaska Department of Fish and Game
                   Publication Date: Unpublished material
                   Title: Most Environmentally Sensitive Areas
                   Geospatial Data Presentation Form: Hardcopy Map
      Source Scale Denominator: 250000
      Type of Source Media: Paper
      Source Time Period of Content:
            Time Period Information:
                   Single Date/Time:
                         Calendar Date: 2000
            Source Currentness Reference: Date of study
      Source Citation Abbreviation: None
      Source Contribution: Bird information
Source Information:
      Source Citation:
            Citation Information:
                   Originator: Tim Bowman - U.S. Fish and Wildlife Service
                   Publication Date: Unpublished material
                   Title: Waterfowl Concentrations
                   Geospatial Data Presentation Form: Hardcopy Map
      Source Scale Denominator: 250000
      Type of Source Media: Paper
      Source Time Period of Content:
            Time Period Information:
                   Single Date/Time:
                         Calendar Date: 2000
```

```
Source Currentness Reference: Date of study
      Source Citation Abbreviation: None
      Source Contribution: Bird information
Source Information:
      Source Citation:
             Citation Information:
                   Originator: Alaska Department of Fish and Game
                   Publication Date: 1984
                   Title: Habitat Management Guides
                   Geospatial Data Presentation Form: Hardcopy Map
                   Publication Information:
                          Publication Place: Anchorage, Alaska
                          Publisher: Alaska Department of Fish and Game
      Source Scale Denominator: 250000
      Type_of_Source_Media: Paper
      Source Time Period of Content:
             \overline{T}ime \overline{P}eriod \overline{I}nformation:
                   Single Date/Time:
                          Calendar Date: 1982
             Source Currentness Reference: Date of study
      Source Citation Abbreviation: None
      Source Contribution: Bird information
Source Information:
      Source Citation:
             Citation Information:
                   Originator: Audubon Society
                   Publication Date: Unpublished material
                   Title: Christmas Bird Count
                   Geospatial Data Presentation Form: Digital table
      Type of Source Media: Online
      Source Time Period of Content:
             Time Period Information:
                   Range_of_Dates/Times:
                          Beginning Date: 1995
                          Ending Date: 1999
             Source Currentness Reference: Date of study
      Source Citation Abbreviation: None
      Source Contribution: Bird information
Source Information:
      Source Citation:
             Citation Information:
                   Originator: Melia Knecht
                   Publication Date: Unpublished material
                   Title: Personal Communication
                   Geospatial Data Presentation Form: Hardcopy Map
      Source Scale Denominator: 250000
      Type_of_Source_Media: Paper
      Source Time Period of Content:
             Time Period Information:
                   Single Date/Time:
                          Calendar Date: 2000
             Source Currentness Reference: Date of Communication
      Source Citation Abbreviation: None
      Source Contribution: Bird information
Source Information:
      Source Citation:
             Citation Information:
                   Originator: Aleutians West CRSA
                   Publication Date: Unpublished material
                   Title: Coastal Zone Management Plan
                   Geospatial Data Presentation Form: Hardcopy Map
      Source Scale Denominator: 500000
      Type of Source Media: Paper
      Source Time Period of Content:
             \overline{T}ime \overline{P}eriod \overline{I}nformation:
                   Single Date/Time:
```

Calendar Date: 1985

```
Source Currentness Reference: Date of study
      Source Citation Abbreviation: None
      Source Contribution: Bird information
Source Information:
      Source Citation:
             Citation Information:
                    Originator: Chris Dau
                    Publication_Date: Unpublished material
                    Title: Personal Communication
                    Geospatial Data Presentation Form: Hardcopy Map
      Source Scale Denominator: 250000
      Type of Source Media: Paper
      Source Time Period of Content:
             \overline{T}ime \overline{P}eriod \overline{I}nformation:
                    Single Date/Time:
                          Calendar Date: 2000
             Source Currentness Reference: Date of Communication
      Source Citation Abbreviation: None
      Source Contribution: Bird information
Process Step:
      Process Description:
```

Data used to depict bird distribution for this data layer came from a number of sources: personal interviews with resource experts from the U.S. Fish & Wildlife Service (USFWS) in Anchorage and with locals who had expert knowledge; Alaska Dept. of Fish and Game's Most Environmentally Sensitive Areas maps and Habitat Management Guides; Aleutians East and West Coastal Resource Service Area (CRSA) management plan; and information from the Audubon Christmas bird count. Information gathered from the interviews and other maps were compiled onto 1:250,000 scale USGS topographic maps. Digital data were either used exactly as provided, or the information from the coverages was transposed onto the topographic maps by hand if the format in

or the information from the coverages was transposed onto the topographic maps by hand if the format in which it was received was not compatible with the ESI data format. Following the data compilation phase, several sets of completed maps were sent out to the resource agencies for review, and edits were made based on recommendations by the resource experts. Concentration information varied, and therefore for some species and locations, descriptive terms such as "HIGH", "MEDIUM", or "LOW" were used, while for others, numerical counts of nests or individuals were used. In many cases, concentration information was provided by

resource experts.

Process_Date: 200111

Process_Contact:

 $Contact_Information:$

Contact Organization Primary:

Contact_Organization: NOAA, Office of Response and Restoration

Contact_Person: Jill Petersen

Contact Address:

Address_Type: Physical address Address: 7600 Sand Point Way, N.E.

City: Seattle

State_or_Province: Washington Postal_Code: 98115-6349

Contact_Voice_Telephone: (206) 526-6944 Contact Facsimile Telephone: (206) 526-6329

Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov

```
Spatial Data Organization Information:
      Direct Spatial Reference Method: Vector
     Point and Vector Object Information:
            SDTS Terms Description:
                  SDTS Point and Vector Object Type: GT-polygon composed of rings
                  Point and Vector Object Count: 1805
            SDTS Terms Description:
                  SDTS Point and Vector Object Type: Area point
                  Point and Vector Object Count: 1805
            SDTS Terms Description:
                  SDTS Point and Vector Object Type: Complete chain
                  Point and Vector Object Count: 3595
            SDTS Terms Description:
                  SDTS Point and Vector Object Type: Link
                  Point and Vector Object Count: 876664
            SDTS Terms Description:
```

SDTS_Point_and_Vector_Object_Type: Node, planar graph Point_and_Vector_Object_Count: 3551

Spatial Reference Information:

Horizontal Coordinate System Definition:

Geographic:

Latitude_Resolution: 0.00005 Longitude Resolution: 0.00005

Geographic_Coordinate_Units: Decimal degrees

Geodetic Model:

Horizontal Datum Name: North American Datum of 1927

Ellipsoid_Name: Clark 1866 Semi-major Axis: 6378206.4

Denominator_of_Flattening_Ratio: 294.978698

Entity and Attribute Information:

Overview_Description:

Entity and Attribute Overview:

In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, BIRDS) is linked to the Biological Resources table (BIORES) using the unique ID and the lookup table BIO_LUT, or it can be linked directly using RARNUM. The ID is a unique combination of the atlas number (for the Aleutian Islands atlas, the number is 72), an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described below in detail. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure. Due to the complexity of the relational database model, the data items are also post-processed into a flat file format. This table, called BIOFILE, may be used in place of the relational files described below to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN SPEC, S. F. T. E. NHP, DATE PUB, CONC. JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G SOURCE, S SOURCE, and BREED. All of these items are the same as their counterparts in the individual data tables described below, except the BREED1-BREED5 and BREED items. BREED is a newly generated variable used to link to the BREED_DT data table, a modified, more compact version of the relational BREED data table. BREED1-BREED5 give a text summary of when each life stage occurs within the associated map object. The life stages referred to are the same as those listed in the Detailed_Description of the BREED data table. The link to the BIOFILE may be made through the BIO_LUT, using ID to link to RARNUM, or BIOFILE may be linked directly to the RARNUM in each of the geographic layer's attribute data tables. As mentioned, BREED_DT is an auxiliary support data table to the flat file structure, which allows the user to do searches based on month for seasonal breeding activities. The link from the flat file to BREED_DT is the BREED item. A second supporting data table is SOURCES. This is the same as the source file described above, and the link from the flat file is both G SOURCE and S SOURCE. It should be noted that although the flat file eases data query, it is not a normalized database structure, and actual updates performed by the states and other responsible agencies should be done using the relational data tables. The entity-relationship diagram describing relationships between attribute tables in the ESI data structure does NOT include the BIOFILE data table, and this data table is NOT described in detail below.

Detailed Description:

Entity Type:

Entity_Type_Label: BIRDS.PAT

Entity Type Definition:

The BIRDS.PAT table contains attribute information for the vector polygons representing bird nesting, foraging, and rafting areas. Note that all attribute information is stored in a series of relational files, described below. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.

Entity Type Definition Source: Research Planning, Inc.

Attribute:

Attribute_Label: ID Attribute Definition:

An identifier that links vector objects in the biology data layers to records in the BIO_LUT data table. ID is a concatenation of atlas number (72), element number (1), and record number. ID values of 9999 are holes in polygons and do not contain information.

Attribute_Definition_Source: NOAA

Attribute Domain Values:

Range Domain:

Range_Domain_Minimum: 720100002 Range_Domain_Maximum: 720101809

Attribute:

Attribute Label: RARNUM

Attribute Definition:

An identifier that links directly to the BIORES table or the flat format BIOFILE table. RARNUM values of 0 are holes in the polygons and do not contain information.

Attribute Definition Source: NOAA

Attribute Domain Values:

Range Domain:

Range_Domain_Minimum: 72000001 Range Domain Maximum: 72000424

Detailed Description:

Entity_Type:

Entity_Type_Label: BIO_LUT

Entity_Type_Definition:

The data table BIO_LUT is a lookup table that contains items necessary for linking vector objects in the biological data layers with the BIORES data table. Note that all attribute information is stored in a series of relational files, described below. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

Entity_Type_Definition_Source: Research Planning, Inc.

Attribute:

Attribute Label: RARNUM

Attribute Definition:

An identifier that links records in the BIO_LUT data table to records in the BIORES data table or the flat format BIOFILE data table. RARNUM values of 0 are holes in the polygons and do not contain information.

Attribute Definition Source: NOAA

Attribute Domain Values:

Range Domain:

Range_Domain_Minimum: 72000001 Range_Domain_Maximum: 72000615

Attribute:

Attribute_Label: ID Attribute Definition:

An identifier that links vector objects in the biology data layers to records in the BIO_LUT data table. ID is a concatenation of atlas number (72), element number (1), and record number. ID values of 9999 are holes in polygons and do not contain information.

Attribute Definition Source: NOAA

Attribute Domain Values:

Range_Domain:

Range Domain Minimum: 720100002 Range Domain Maximum: 723400623

$Detailed_Description:$

Entity_Type:

Entity_Type_Label: BIORES

 $Entity_Type_Definition:$

The data table BIORES contains both biological attribute data and items necessary for linking vector objects in the biological data layers via the BIO_LUT data table to other associated data tables. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

Entity_Type_Definition_Source: Research Planning, Inc.

Attribute:

Attribute Label: RARNUM

Attribute Definition:

An identifier that links records in the BIORES data table to records in the BIO_LUT data table or the flat format BIOFILE data table.

Attribute_Definition_Source: NOAA

Attribute Domain Values:

Range_Domain:

Range Domain Minimum: 072000001 Range Domain Maximum: 072000615

Attribute:

Attribute Label: SPECIES_ID

Attribute Definition:

Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA.

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

```
Range Domain:
                  Range Domain Minimum: 1
                  Range Domain Maximum: N
Attribute:
      Attribute Label: CONC
      Attribute Definition:
            The field CONC refers to "concentration," abundance, or density values, and may contain descriptive terms,
            such as "HIGH", "MED", "LOW", or "UNKNOWN".
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: Any character
                   Enumerated Domain Value Definition: Free text
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: SEASON_ID
      Attribute Definition:
            Numeric identifier for the unique monthly presence and life history characteristics of each species at a given
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Range Domain:
                  Range Domain Minimum: 1
                  Range Domain Maximum: N
Attribute:
      Attribute Label: G_SOURCE
      Attribute Definition:
            Geographic source identifier that links records in the BIORES data table to records in the SOURCES data table.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Range Domain:
                  Range Domain Minimum: 1
                  Range Domain Maximum: N
Attribute:
      Attribute Label: S_SOURCE
      Attribute Definition:
            Seasonality source identifier that links records in the BIORES data table to records in the SOURCES data table.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Range Domain:
                  Range Domain Minimum: 1
                  Range Domain Maximum: N
Attribute:
      Attribute Label: ELEMENT
      Attribute Definition: Major categories of biological data
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: BIRD
                   Enumerated Domain Value Definition: Birds
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: FISH
                   Enumerated Domain Value Definition: Fish
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: HABITAT
                   Enumerated Domain Value Definition: Habitats and plants
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
```

Attribute Domain Values:

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: INVERT

Enumerated Domain Value Definition: Invertebrates

Enumerated Domain Value Definition Source: Research Planning, Inc.

```
Aleutian Islands Coastal Resources Inventory and
                   Enumerated Domain:
                         Enumerated Domain Value: M MAMMAL
                         Enumerated Domain Value Definition: Marine mammals
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: REPTILE
                         Enumerated Domain Value Definition: Reptiles and Amphibians
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: T_MAMMAL
                         Enumerated Domain Value Definition: Terrestrial mammals
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: EL SPE
            Attribute Definition:
                   Concatenation of ELEMENT and SPECIES_ID. This item links records in the BIORES data table to records in
                   the SPECIES and STATUS data tables.
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: E#####
                         Enumerated Domain Value Definition:
                                Where E is the first character of ELEMENT and the next five characters are SPECIES ID (eg.
                                ELEMENT = 'BIRD' and SPECIES ID = 1; EL SPE = 'B00001').
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
            Attribute_Label: EL_SPE_SEA
            Attribute Definition:
                   Concatenation of ELEMENT, SPECIES ID, and SEASON ID. This item links records in the BIORES data
                   table to records in the SEASONAL and BREED data tables.
            Attribute Definition Source: Research Planning, Inc.
            Attribute_Domain_Values:
                   Enumerated Domain:
                         Enumerated Domain Value: E######
                         Enumerated Domain Value Definition:
                                Where E is the first character of ELEMENT, the next five characters are SPECIES_ID, and the
                                last two characters are SEASON_ID (eg. ELEMENT = 'BIRD', SPECIES_ID = 1 and
                                SEASON_{ID} = 1; EL_{SPE}SEA = 'B0000101').
                         Enumerated_Domain_Value Definition Source: Research Planning, Inc.
Detailed Description:
      Entity Type:
            Entity_Type_Label: SPECIES
            Entity Type Definition:
                   The data table SPECIES identifies all species in the ESI data set. See the Browse_Graphic section for a link to
                   the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI
                   data structure. Refer to the Completeness_Report for a list of layer-specific species.
            Entity Type Definition Source: Research Planning, Inc.
      Attribute:
             Attribute Label: SPECIES ID
            Attribute Definition:
                   Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI
                   species list maintained at NOAA.
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Range Domain:
```

Range Domain Minimum: 1 Range Domain Maximum: N

Attribute:

Attribute Label: NAME

Attribute Definition: Species common name

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: Species common name for the entire ESI data set

Enumerated Domain Value Definition: Free text

```
Attribute:
```

Attribute Label: GEN SPEC

Attribute Definition: Species scientific name

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated Domain:

Enumerated Domain Value: Species scientific name for the entire ESI data set.

Enumerated Domain Value Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute Label: ELEMENT

Attribute_Definition: Major categories of biological data

Attribute Definition Source: Research Planning, Inc.

 $Attribute_Domain_Values:$

Enumerated Domain:

Enumerated_Domain_Value: BIRD

Enumerated Domain Value Definition: Birds

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: FISH

Enumerated Domain Value Definition: Fish

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: HABITAT

Enumerated Domain Value Definition: Habitats and plants

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: INVERT

Enumerated_Domain_Value_Definition: Invertebrates

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: M_MAMMAL

Enumerated Domain Value Definition: Marine Mammals

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: REPTILE

Enumerated Domain Value Definition: Reptiles and Amphibians

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated_Domain:

Enumerated Domain Value: T_MAMMAL

Enumerated Domain Value Definition: Terrestrial Mammals

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: SUBELEMENT

Attribute_Definition: Element subgroup delineating a logical grouping of species

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: alcid

Enumerated Domain Value Definition: Alcid

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: bivalve

Enumerated Domain Value Definition: Bivalve

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated_Domain:

Enumerated Domain Value: crab

Enumerated Domain Value Definition: Crab

```
Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: diadromous
                  Enumerated Domain Value Definition: Diadromous fish
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: diving
                  Enumerated Domain Value Definition: Diving bird
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: e_nursery
                  Enumerated Domain Value Definition: Estuarine nursery fish
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: gull_tern
                  Enumerated Domain Value Definition: Gull or tern
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: m_benthic
                  Enumerated Domain Value Definition: Marine benthic fish
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: m_pelagic
                  Enumerated Domain Value Definition: Marine pelagic fish
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: pelagic
                  Enumerated Domain Value Definition: Pelagic bird
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: pinniped
                  Enumerated Domain Value Definition: Pinniped
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: sav
                  Enumerated Domain Value Definition: Submersed aquatic vegetation
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: shorebird
                  Enumerated Domain Value Definition: Shorebird
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: sea_otter
                  Enumerated Domain Value Definition: Otter
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: waterfowl
                  Enumerated Domain Value Definition: Waterfowl
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: NHP
      Attribute Definition: Natural Heritage Program global ranking
      Attribute Definition Source: Network of Natural Heritage Program
      Attribute Domain Values:
            Codeset Domain:
```

```
Codeset Name: NHP Global Conservation Status Rank
                         Codeset Source: Natural Heritage Program
      Attribute:
            Attribute Label: DATE_PUB
            Attribute Definition: Date of NHP listing
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: 0
                         Enumerated Domain Value Definition: Not ranked
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: Numeric
                         Enumerated Domain Value Definition: mmyyyy
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: EL_SPE
            Attribute Definition:
                   Concatenation of ELEMENT and SPECIES ID. This item links records in the SPECIES data table to records in
                   the BIORES and STATUS data tables.
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: E#####
                         Enumerated Domain Value Definition:
                               Where E is the first character of ELEMENT and the next five characters are SPECIES_ID (eg.
                               ELEMENT = 'BIRD' and SPECIES_ID = 1; EL_SPE = 'B00001').
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
Detailed Description:
      Entity Type:
            Entity Type Label: SEASONAL
            Entity Type Definition:
                   The data table SEASONAL contains information on the seasonal presence of each species associated with each
                   spatial vector object. See the Browse Graphic section for a link to the entity-relationship diagram, which
                   describes the way this table relates to other attribute tables in the ESI data structure.
            Entity Type Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: ELEMENT
            Attribute Definition: Major categories of biological data
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: BIRD
                         Enumerated Domain Value Definition: Birds
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: FISH
                         Enumerated Domain Value Definition: Fish
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: HABITAT
                         Enumerated Domain Value Definition: Habitats and plants
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: INVERT
                         Enumerated Domain Value Definition: Invertebrates
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: M_MAMMAL
                         Enumerated Domain Value Definition: Marine Mammals
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
```

Attribute Domain Values:

```
Enumerated Domain:
                  Enumerated Domain Value: REPTILE
                  Enumerated Domain Value Definition: Reptiles and Amphibians
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: T_MAMMAL
                  Enumerated Domain Value Definition: Terrestrial Mammals
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: SPECIES ID
      Attribute Definition:
            Numeric identifier for each species that is unique within each element and refers to a nationwide ESI species list
            maintained at NOAA.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Range Domain:
                  Range Domain Minimum: 1
                  Range Domain Maximum: N
Attribute:
      Attribute Label: SEASON_ID
      Attribute Definition:
            Numeric identifier for the unique monthly presence and life history characteristics of each species at a given
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Range Domain:
                  Range Domain Minimum: 1
                  Range Domain Maximum: N
Attribute:
      Attribute Label: JAN
      Attribute Definition: January
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: X
                  Enumerated Domain Value Definition: Present in January
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: FEB
      Attribute Definition: February
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: X
                  Enumerated Domain Value Definition: Present in February
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: MAR
      Attribute Definition: March
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: X
                  Enumerated Domain Value Definition: Present in March
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: APR
      Attribute Definition: April
      Attribute Definition Source: Research Planning, Inc.
      Enumerated Domain:
                  Enumerated Domain Value: X
                  Enumerated Domain Value Definition: Present in April
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
```

Attribute Label: MAY

```
Attribute Definition: May
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in May
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: JUN
      Attribute Definition: June
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: X
                  Enumerated Domain Value Definition: Present in June
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute_Label: JUL
      Attribute Definition: July
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in July
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: AUG
      Attribute Definition: August
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in August
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: SEP
      Attribute Definition: September
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in September
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: OCT
      Attribute Definition: October
      Attribute Definition Source: Research Planning, Inc.
      Attribute_Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in October
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: NOV
      Attribute Definition: November
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in November
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: DEC
      Attribute Definition: December
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
```

```
Enumerated Domain Value: X
```

Enumerated Domain Value Definition: Present in December

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: EL_SPE_SEA

Attribute Definition:

Concatenation of ELEMENT, SPECIES_ID, and SEASON_ID. This item links records in the SEASONAL data table to records in the BIORES and BREED data tables.

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: E######

Enumerated Domain Value Definition:

Where E is the first character of ELEMENT, the next five characters are SPECIES_ID, and the last two characters are SEASON_ID (eg. ELEMENT = 'BIRD', SPECIES_ID = 1 and SEASON_ID = 1; EL_SPE_SEA = 'B0000101').

Enumerated Domain Value Definition Source: Research Planning, Inc.

Detailed Description:

Entity_Type:

Entity Type Label: BREED

Entity Type Definition:

The data table BREED identifies the monthly presence of certain life-history stages or activities for each species at a given location.

Entity_Type_Definition_Source: Research Planning, Inc.

Attribute:

Attribute Label: EL_SPE_SEA

Attribute Definition:

Concatenation of ELEMENT, SPECIES_ID, and SEASON_ID. This item links records in the BREED data table to records in the BIORES and SEASONAL data tables.

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated_Domain_Value: E######

Enumerated Domain Value Definition:

Where E is the first character of ELEMENT, the next five characters are SPECIES_ID, and the last two characters are SEASON_ID (eg. ELEMENT = 'BIRD', SPECIES_ID = 1 and SEASON_ID = 1; EL_SPE_SEA = 'B0000101').

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute_Label: MONTH

 $Attribute _Definition:$

Two-digit calendar month. Each life history stage or activity type for a particular species can have up to 12 records to account for each month of the year.

Attribute_Definition_Source: Research Planning, Inc.

Attribute Domain Values:

Range_Domain:

Range_Domain_Minimum: 1
Range_Domain_Maximum: 12

Attribute:

Attribute Label: BREED1

Attribute_Definition:

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED1 = nesting; if ELEMENT is "FISH" then BREED1 = spawning; if ELEMENT is "INVERT" then BREED1 = spawning/mating; if ELEMENT is "REPTILE" then BREED1 = nesting; if ELEMENT is "M_MAMMAL" then BREED1 = mating.

This attribute is not used for HABITAT or T_MAMMAL elements.

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: Y

Enumerated Domain Value Definition: Life-history stage or activity present

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated_Domain:

Enumerated Domain Value: N

Enumerated_Domain_Value_Definition: Life-history stage or activity not present

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

```
Aleutian Islands Coastal Resources Inventory and
                                                                                      Environmental Sensitivity Maps: BIRDS (Bird Polygons)
             Enumerated Domain Value: -
             Enumerated Domain Value Definition:
                    Breed category not used or not appropriate for record(s) in question
             Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Label: BREED2
Attribute Definition:
      Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED2 = laying; if ELEMENT is
       "FISH" then BREED2 = eggs; if ELEMENT is "INVERT" then BREED2 = eggs; if ELEMENT is "REPTILE"
      then BREED2 = hatching; if ELEMENT is "M_MAMMAL" then BREED2 = calving. This attribute is not used
      for HABITAT or T_MAMMAL elements.
Attribute Definition Source: Research Planning, Inc.
Attribute_Domain_Values:
      Enumerated Domain:
             Enumerated Domain Value: Y
             Enumerated Domain Value Definition: Life-history stage or activity present
             Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
             Enumerated Domain Value: N
             Enumerated Domain Value Definition: Life-history stage or activity not present
             Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
             Enumerated Domain Value: -
             Enumerated Domain Value Definition:
                    Breed category not used or not appropriate for record(s) in question
             Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Label: BREED3
Attribute Definition:
      Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED3 = hatching; if ELEMENT is
      "FISH" then BREED3 = larvae; if ELEMENT is "INVERT" then BREED3 = larvae; if ELEMENT is "REPTILE" then BREED3 = internesting; if ELEMENT is "M_MAMMAL" then BREED3 = pupping. This
      attribute is not used for HABITAT or T_MAMMAL elements.
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
             Enumerated Domain Value: Y
             Enumerated Domain Value Definition: Life-history stage or activity present
             Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
             Enumerated Domain Value: N
             Enumerated Domain Value Definition: Life-history stage or activity not present
             Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
             Enumerated Domain Value: -
             Enumerated Domain Value Definition:
                    Breed category not used or not appropriate for record(s) in question
             Enumerated Domain Value Definition Source: Research Planning, Inc.
      Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED4 = fledging; if ELEMENT is
```

Attribute:

Attribute:

Attribute:

Attribute Label: BREED4

Attribute Definition:

"FISH" then BREED4 = juvenile; if ELEMENT is "INVERT" then BREED4 = juvenile; if ELEMENT is "REPTILE" then BREED4 = juvenile; if ELEMENT is "M MAMMAL" then BREED4 = molting. This attribute is not used for HABITAT or T MAMMAL elements.

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: Y

Enumerated Domain Value Definition: Life-history stage or activity present

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

```
Enumerated Domain Value: N
```

Enumerated Domain Value Definition: Life-history stage or activity not present

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: -

Enumerated Domain Value Definition:

Breed category not used or not appropriate for record(s) in question

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: BREED5

Attribute Definition:

Life history stage or activity type, where: if ELEMENT is "FISH" then BREED5 = adults; if ELEMENT is "INVERT" then BREED5 = adults; if ELEMENT is "REPTILE" then BREED5 = adults. This attribute is not used for BIRD, M_MAMMAL, HABITAT, or T_MAMMAL elements.

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: Y

Enumerated Domain Value Definition: Life-history stage or activity present

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: N

Enumerated Domain Value Definition: Life-history stage or activity not present

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: -

Enumerated Domain Value Definition:

Breed category not used or not appropriate for record(s) in question

Enumerated Domain Value Definition Source: Research Planning, Inc.

Detailed Description:

Entity Type:

Entity Type Label: SOURCES

Entity Type Definition:

The data table SOURCES contains the primary sources used to create the ESI data set. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

Entity Type Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: SOURCE_ID

Attribute Definition:

Source identifier that links records in the SOURCES data table to the items G_SOURCE and A_SOURCE in the SOC_DAT table, and to G_SOURCE and S_SOURCE in the BIORES table.

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Range Domain:

Range Domain Minimum: 1

Range Domain Maximum: N

Attribute:

Attribute Label: ORIGINATOR

Attribute Definition: Author or developer of source material or data set

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: Any character

Enumerated Domain Value Definition: Free text

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: DATE_PUB

Attribute Definition:

Date of source material, publication, or date of personal communication with expert source

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: Numeric

```
Enumerated Domain Value Definition: mmyyyy
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: TITLE
            Attribute Definition: Title of source material or data
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: Any character
                         Enumerated Domain Value Definition: Free text
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
             Attribute Label: DATA_FORMAT
            Attribute Definition: The format of the source material
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: Any character
                         Enumerated Domain Value Definition: Free text
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
             Attribute Label: PUBLICATION
            Attribute Definition: Additional citation information
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain_Value: Any character
                         Enumerated Domain Value Definition: Free text
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: SCALE
            Attribute Definition: Scale denominator of the source
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: integer
                         Enumerated Domain Value Definition: Any integer
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: TIME_PERIOD
            Attribute Definition:
                   Date(s) of data collection that the source material is based upon.
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: Numeric
                         Enumerated Domain Value Definition: yyyy
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
Detailed Description:
      Entity Type:
            Entity Type Label: STATUS
            Entity Type Definition:
                   The data table STATUS identifies the species that are listed as either threatened or endangered by a state or
                   federal authority. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes
                   the way this table relates to other attribute tables in the ESI data structure.
            Entity Type Definition Source: Research Planning, Inc.
      Attribute:
             Attribute Label: ELEMENT
            Attribute Definition: Major categories of biological data
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: BIRD
                         Enumerated Domain Value Definition: Birds
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
```

```
Environmental Sensitivity Maps: BIRDS (Bird Polygons)
                   Enumerated Domain Value: FISH
                  Enumerated Domain Value Definition: Fish
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: HABITAT
                   Enumerated Domain Value Definition: Habitats and Plants
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: INVERT
                  Enumerated Domain Value Definition: Invertebrates
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: M MAMMAL
                   Enumerated Domain Value Definition: Marine Mammals
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: REPTILE
                   Enumerated Domain Value Definition: Reptiles and Amphibians
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: T_MAMMAL
                   Enumerated Domain Value Definition: Terrestrial Mammals
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: SPECIES_ID
      Attribute Definition:
            Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI
            species list maintained at NOAA
      Attribute Definition Source: Research Planning, Inc.
      Attribute_Domain Values:
            Range Domain:
                  Range Domain Minimum: 1
                  Range Domain Maximum: N
Attribute:
      Attribute Label: STATE
      Attribute Definition: Two-letter state abbreviation
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: Any character
                   Enumerated Domain Value Definition: Two-letter state abbreviation
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Label: S_F
      Attribute Definition: State and Federal status.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: F
                  Enumerated Domain Value Definition: Federally listed
```

Attribute:

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: S

Enumerated Domain Value Definition: State listed

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: S/F

Enumerated Domain Value Definition: State and federally listed

Enumerated Domain Value Definition Source: Research Planning, Inc.

```
Attribute Label: T E
      Attribute Definition: Threatened and endangered status.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: E
                   Enumerated_Domain_Value Definition: Endangered on state or federal list
                   Enumerated Domain Value Definition Source: U.S. Fish and Wildlife Service
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: T
                   Enumerated Domain Value Definition: Threatened on state or federal list
                   Enumerated Domain Value Definition Source: U.S. Fish and Wildlife Service
Attribute:
      Attribute Label: DATE PUB
      Attribute Definition:
            Publication date of source material used to assign state and federal status values for each species, if used.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: Numeric
                   Enumerated Domain Value Definition: mmyyyy
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute_Label: EL_SPE
      Attribute Definition:
            Concatenation of ELEMENT and SPECIES ID. This item links the STATUS data table to the BIORES and
            SPECIES data tables.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: E#####
                   Enumerated Domain Value Definition:
                         Where E is the first character of ELEMENT and the next five characters are SPECIES ID (eg.
```

ELEMENT = 'BIRD' and SPECIES ID = 1; EL SPE = 'B00001'). Enumerated Domain Value Definition Source: Research Planning, Inc.

Distribution Information:

Distributor:

Contact Information:

Contact Person Primary:

Contact Person: John Kaperick

Contact Organization: NOAA, Office of Response and Restoration

Contact Address:

Address Type: Physical Address Address: 7600 Sand Point Way, N.E.

City: Seattle

State or Province: Washington Postal Code: 98115-6349

Contact Voice Telephone: (206) 526-6400 Contact Facsimile Telephone: (206) 526-6329 Resource Description: ESI Atlas for the Aleutian Islands

Distribution Liability:

Although these data have been processed successfully on a computer system at the National Oceanic and Atmospheric Administration, no warranty, expressed or implied, is made by NOAA regarding the utility of the data on any other system, nor shall the act of distribution constitute any such warranty. NOAA warrants the delivery of this product in computer-readable format, and will offer a replacement copy of the product when the product is determined unreadable by computer-input peripherals, or when the physical medium is delivered in damaged condition.

Custom Order Process:

Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to a wider community of GIS/mapping users. Distribution formats include ARC export, MOSS and Shape files, and MARPLOT map folders. An ArcView ESI project and ESI_Viewer product are also included on the distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

Metadata Reference Information: Metadata Date: 200205 Metadata Review Date: 200205 Metadata Contact: Contact Information: Contact_Person_Primary: Contact Person: Jill Petersen Contact Organization: NOAA, Office of Response and Restoration Contact Position: GIS Manager Contact Address: Address_Type: Physical Address Address: 7600 Sand Point Way, N.E. City: Seattle State or Province: Washington Postal Code: 98115-6349 Contact_Voice_Telephone: (206) 526-6944 Contact_Facsimile_Telephone: (206) 526-6329 Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov Metadata Standard Name: Content Standards for Digital Geospatial Metadata Metadata Standard Version: FGDC-STD-001-1998

Generated by mp version 2.7.23 on Thu May 16 14:38:01 2002

Aleutian Islands Coastal Resources Inventory and Environmental Sensitivity Maps: NESTS (Nest Polygons)

Metadata also available as - [Parseable text] - [SGML]

Metadata:

- Identification Information
- Data Quality Information
- Spatial Data Organization Information
- Spatial Reference Information
- Entity and Attribute Information
- Distribution Information
- Metadata_Reference_Information

Identification Information:

Citation:

Citation Information:

Originator:

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Prince William Sound Oil Spill Recovery Institute; Aleutians West Coastal Resource Service Area (CRSA); Aleutians East Borough; Alaska Chadux Corporation; United States Coast Guard; and National Fish & Wildlife Foundation.

Publication Date: 200205

Title:

Aleutian Islands Coastal Resources Inventory and Environmental Sensitivity Maps: NESTS (Nest Polygons)

Edition: First

Geospatial_Data_Presentation_Form: Digital vector data

Series Information:

Series Name: None

Issue_Identification: Aleutian Islands

Publication Information:

Publication_Place: Seattle, Washington

Publisher:

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington

Other Citation Details:

Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Prince William Sound Oil Spill Recovery Institute; Aleutians West Coastal Resource Service Area (CRSA); Aleutians East Borough; Alaska Chadux Corporation; United States Coast Guard; and National Fish & Wildlife Foundation.

Description:

Abstract:

This data set contains biological resource data for alcids, shorebirds, waterfowl, diving birds, pelagic birds, gulls and terns in the Aleutian Islands, Alaska. Points in this data set represent locations of bird nesting sites. Species-specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for Aleutians East Borough and Aleutians West Coastal Resource Service Area (CRSA). These data identify the marine and coastal environments and wildlife. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources. See also the BIRDS (Bird Polygons) data layer, part of the larger Aleutians East/Aleutians West ESI database, for additional bird information.

Purpose:

The ESI data were collected, mapped, and digitized to provide environmental data for oil spill planning and response. The Clean Water Act with amendments by the Oil Pollution Act of 1990 requires response plans for immediate and effective protection of sensitive resources.

Time Period of Content:

Time Period Information:

Range_of_Dates/Times:

Beginning_Date: 2000 Ending_Date: 2001

Currentness_Reference:

The biological data were compiled during 2000-2001. The currentness dates for these data range from 2000 to 2001 and are documented in the Source_Information section

Status:

Progress: Complete

Maintenance and Update Frequency: None Scheduled

Spatial Domain:

Bounding Coordinates:

West_Bounding_Coordinate: 172.42000 East_Bounding_Coordinate: -158.81002 North_Bounding_Coordinate: 58.133120 South Bounding_Coordinate: 48.351629

Keywords:

Theme:

Theme Keyword Thesaurus: None

Theme Keyword: ESI

Theme_Keyword: Sensitivity maps Theme_Keyword: Coastal resources Theme_Keyword: Oil spill planning

Theme_Keyword: Coastal Zone Management

Theme_Keyword: Wildlife Theme_Keyword: Nest Theme_Keyword: Bird

Place:

Place_Keyword_Thesaurus: None Place Keyword: Aleutian Islands

Access Constraints: None

Use Constraints:

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

Browse Graphic:

Browse_Graphic_File_Name: datafig.jpg Browse Graphic File Description:

Relationships between spatial data layers and attribute data tables for the Aleutian Islands ESI data.

Browse Graphic File Type: JPEG

Data Set Credit:

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Prince William Sound Oil Spill Recovery Institute; Aleutians West Coastal Resource Service Area (CRSA); Aleutians East Borough; Alaska Chadux Corporation; United States Coast Guard; and National Fish & Wildlife Foundation.

Native Data Set Environment:

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.0.2) and ORACLE(r) RDBMS (version 8.0.5.0.0). The hardware configuration is Hewlett Packard workstations (models 715/50 and 712/80i) with UNIX operating system (HP-UX Release A.10.20), and PC's with Windows Operating System (NT4.0/2000). The Spatial_Data_Organization Information section refers only to the source files in the ARC export format. The following files are included in that data set: birds.e00, bio_lut.e00, biofile.e00, biores.e00, breed_e00, breed_dt.e00, esi.e00, faults.e00, fish.e00, fishl.e00, geo.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, m_mampt.e00, mgt.e00, nests.e00, seasonal.e00, soc_dat.e00, soc_lut.e00, socecon.e00, sources.e00, species.e00, status.e00, volcanos.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biofile, biores, breed, breed dt, seasonal, soc_dat, soc_lut, socecon, sources, species, and status.

Data Quality Information:

Attribute Accuracy:

Attribute Accuracy Report:

A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.

Logical Consistency Report:

A multi-stage error checking process, described in the above Attribute_Accuracy_Report, is used to verify both attribute

accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary node, etc.), and ORACLE(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks. In the process of checking for topological and database consistencies, new ID's and RARNUM's or HUNUM's are also generated. The new ID's are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "resource at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

Completeness Report:

These data were obtained from digital data on bird nesting sites. Refer to the BIRDS (Bird Polygons) data layer for additional bird distribution information. These data do not necessarily represent all bird occurrences in the Aleutian Islands, Alaska. The following species are included in this data set (Species_ID, Common Name, Scientific Name, if applicable): 8, Double-crested cormorant, Phalacrocorax auritus; 10, Pelagic cormorant, Phalacrocorax pelagicus; 36, Glaucous-winged gull, Larus glaucescens; 41, Mew gull, Larus canus; 46, Common murre, Uria aalge; 47, Pigeon guillemot, Cepphus columba; 49, Cassin's auklet, Ptychoramphus aleuticus; 50, Rhinoceros auklet, Cerorhinca monocerata; 51, Tufted puffin, Fratercula cirrhata; 68, Black oystercatcher, Haematopus bachmani; 79, Cormorant, Phalacrocorax sp.; 80, Arctic tern, Sterna paradisaea; 81, Horned puffin, Fratercula corniculata; 84, Parakeet auklet, Aethia psittacula; 96, Leach's storm-petrel, Oceanodroma leucorhoa; 99, Red-faced cormorant, Phalacrocorax urile; 100, Black-legged kittiwake, Rissa tridactyla; 101, Aleutian tern, Sterna aleutica; 102, Fork-tailed storm-petrel, Oceanodroma furcata; 103, Common eider, Somateria mollissima; 104, Murre, Uria sp.; 105, Thick-billed murre, Uria lomvia; 106, Ancient murrelet, Synthliboramphus antiquus; 109, Crested auklet, Aethia cristatella; 111, Least auklet, Aethia pusilla; 129, Northern fulmar, Fulmarus glacialis; 130, Red-legged kittiwake, Rissa brevirostris; 345, Storm-petrels, Oceanodroma spp.; 618, Whiskered auklet, Aethia pygmaea; 1008, Terns.

Positional Accuracy:

Horizontal Positional Accuracy:

Horizontal Positional Accuracy Report:

This biological data set was developed from pre-existing digital sources and reflects the positional accuracy of these original data. See the Lineage and Process_Description sections for more information on the original data source and how these data were integrated or manipulated to create the final data set. Note that biological resource data by their very nature are considered "fuzzy", and this should be understood when considering the positional accuracy of vector digital objects representing these resources.

Lineage:

Source Information:

Source Citation:

Citation_Information:

Originator: Shawn Stevenson, U.S. Fish and Wildlife Service

Publication_Date: Unpublished material Title: Beringian Seabird Colony Catalog

Geospatial Data Presentation Form: Digital table

Type of Source Media: Electronic mail service

Source Time Period of Content:

 \overline{T} ime \overline{P} eriod \overline{I} nformation:

 $Single_Date/Time:$

Calendar Date: 2000

Source_Currentness_Reference: Date of study

Source_Citation_Abbreviation: None

Source Contribution: Nesting information

Process Step:

Process Description:

The data source used to depict bird nesting locations was the U.S. Fish and Wildlife Service (USFWS) Beringian Seabird Database. The positional data were used exactly as provided, and the attribute data were converted to a format compatible with the ESI data format. Following the data compilation phase, several sets of completed maps were sent out to the resource agencies for review, and edits were made based on recommendations by the resource experts. Concentration information was numerical counts of nests or individuals, where available, and unknown otherwise. In many cases, concentration information was provided by resource experts.

Process_Date: 200111
Process Contact:

Contact Information:

Contact Organization Primary:

Contact Organization: NOAA, Office of Response and Restoration

Contact Person: Jill Petersen

Contact Address:

Address_Type: Physical address Address: 7600 Sand Point Way, N.E.

City: Seattle

State_or_Province: Washington Postal Code: 98115-6349

Contact_Voice_Telephone: (206) 526-6944 Contact_Facsimile_Telephone: (206) 526-6329

Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov

Spatial Data Organization Information:

Direct_Spatial_Reference_Method: Vector Point_and_Vector_Object_Information: SDTS Terms Description:

SDTS Point and Vector Object Type: Entity Point

Point_and_Vector_Object_Count: 379

Spatial Reference Information:

Horizontal Coordinate System Definition:

Geographic:

Latitude_Resolution: 0.00005 Longitude Resolution: 0.00005

Geographic Coordinate Units: Decimal degrees

Geodetic Model:

Horizontal Datum Name: North American Datum of 1927

Ellipsoid_Name: Clark 1866 Semi-major Axis: 6378206.4

Denominator_of_Flattening_Ratio: 294.978698

Entity and Attribute Information:

Overview Description:

Entity and Attribute Overview:

In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, NESTS) is linked to the Biological Resources table (BIORES) using the unique ID and the lookup table BIO LUT, or it can be linked directly using RARNUM. The ID is a unique combination of the atlas number (for the Aleutian Islands atlas, the number is 72), an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described below in detail. See the Browse Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure. Due to the complexity of the relational database model, the data items are also post-processed into a flat file format. This table, called BIOFILE, may be used in place of the relational files described below to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN_SPEC, S_F, T_E, NHP, DATE_PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G_SOURCE, S_SOURCE, and BREED. All of these items are the same as their counterparts in the individual data tables described below, except the BREED1-BREED5 and BREED items. BREED is a newly generated variable used to link to the BREED_DT data table, a modified, more compact version of the relational BREED data table. BREED1-BREED5 give a text summary of when each life stage occurs within the associated map object. The life stages referred to are the same as those listed in the Detailed Description of the BREED data table. The link to the BIOFILE may be made through the BIO_LUT, using ID to link to RARNUM, or BIOFILE may be linked directly to the RARNUM in each of the geographic layer's attribute data tables. As mentioned, BREED DT is an auxiliary support data table to the flat file structure, which allows the user to do searches based on month for seasonal breeding activities. The link from the flat file to BREED_DT is the BREED item. A second supporting data table is SOURCES. This is the same as the source file described above, and the link from the flat file is both G_SOURCE and S_SOURCE. It should be noted that although the flat file eases data query, it is not a normalized database structure, and actual updates performed by the states and other responsible agencies should be done using the relational data tables. The entity-relationship diagram describing relationships between attribute tables in the ESI data structure does NOT include the BIOFILE data table, and this data table is NOT described in detail below.

Detailed_Description:

Entity Type:

Entity_Type_Label: NESTS.PAT

Entity Type Definition:

The NESTS.PAT table contains attribute information for the vector points representing bird nesting sites. Note that all attribute information is stored in a series of relational files, described below. See the Browse_Graphic

section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.

Entity Type Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: ID

Attribute Definition:

An identifier that links vector objects in the biology data layers to records in the BIO_LUT data table. ID is a concatenation of atlas number (72), element number (5), and record number.

Attribute Definition Source: NOAA

Attribute Domain Values:

Range Domain:

Range Domain Minimum: 720500001 Range Domain Maximum: 720500409

Attribute:

Attribute Label: RARNUM

Attribute Definition:

An identifier that links directly to the BIORES table or the flat format BIOFILE table.

Attribute Definition Source: NOAA

Attribute Domain Values:

Range Domain:

Range Domain Minimum: 72000047 Range Domain Maximum: 72000416

Detailed Description:

Entity Type:

Entity Type Label: BIO_LUT

Entity Type Definition:

The data table BIO LUT is a lookup table that contains items necessary for linking vector objects in the biological data layers with the BIORES data table. Note that all attribute information is stored in a series of relational files, described below. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

Entity Type Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: RARNUM

Attribute Definition:

An identifier that links records in the BIO LUT data table to records in the BIORES data table or the flat format BIOFILE data table. RARNUM values of 0 are holes in the polygons and do not contain information.

Attribute Definition Source: NOAA

Attribute Domain Values:

Range Domain:

Range Domain Minimum: 72000001 Range Domain Maximum: 72000615

Attribute:

Attribute Label: ID

Attribute Definition:

An identifier that links vector objects in the biology data layers to records in the BIO LUT data table. ID is a concatenation of atlas number (72), element number (5), and record number. ID values of 9999 are holes in polygons and do not contain information.

Attribute Definition Source: NOAA

Attribute Domain Values:

Range Domain:

Range Domain Minimum: 720100002 Range Domain Maximum: 723400623

Detailed Description:

Entity Type:

Entity Type Label: BIORES

Entity Type Definition:

The data table BIORES contains both biological attribute data and items necessary for linking vector objects in the biological data layers via the BIO_LUT data table to other associated data tables. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

Entity Type Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: RARNUM

Attribute Definition:

An identifier that links records in the BIORES data table to records in the BIO LUT data table or the flat format BIOFILE data table.

Attribute Definition Source: NOAA

Attribute Domain Values:

```
Range Domain:
                   Range Domain Minimum: 072000001
                   Range Domain Maximum: 072000615
Attribute:
      Attribute Label: SPECIES_ID
      Attribute Definition:
            Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI
            species list maintained at NOAA.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Range Domain:
                   Range Domain Minimum: 1
                   Range Domain Maximum: N
Attribute:
      Attribute Label: CONC
      Attribute Definition:
            The field CONC refers to the number of adult breeding individuals for each species present at a particular
            nesting site. In cases where no quantitative count was available, the field contains the word "UNKNOWN".
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: Any character
                   Enumerated Domain Value Definition: Free text
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: SEASON ID
      Attribute Definition:
            Numeric identifier for the unique monthly presence and life history characteristics of each species at a given
            location.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Range Domain:
                   Range Domain Minimum: 1
                   Range Domain Maximum: N
Attribute:
      Attribute Label: G_SOURCE
      Attribute Definition:
            Geographic source identifier that links records in the BIORES data table to records in the SOURCES data table.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Range Domain:
                   Range Domain Minimum: 1
                   Range Domain Maximum: N
Attribute:
      Attribute Label: S_SOURCE
      Attribute Definition:
             Seasonality source identifier that links records in the BIORES data table to records in the SOURCES data table.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Range Domain:
                   Range Domain Minimum: 1
                   Range Domain Maximum: N
Attribute:
      Attribute Label: ELEMENT
      Attribute Definition: Major categories of biological data
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: BIRD
                   Enumerated Domain Value Definition: Birds
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: FISH
                   Enumerated Domain Value Definition: Fish
```

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

```
Enumerated Domain:
```

Enumerated Domain Value: HABITAT

Enumerated Domain Value Definition: Habitats and plants

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: INVERT

Enumerated Domain Value Definition: Invertebrates

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: M_MAMMAL

Enumerated Domain Value Definition: Marine mammals

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: REPTILE

Enumerated Domain Value Definition: Reptiles and Amphibians

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: T_MAMMAL

Enumerated Domain Value Definition: Terrestrial mammals

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: EL_SPE

 $Attribute_Definition:$

Concatenation of ELEMENT and SPECIES_ID. This item links records in the BIORES data table to records in the SPECIES and STATUS data tables.

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated_Domain_Value: E#####

Enumerated_Domain_Value_Definition:

Where E is the first character of ELEMENT and the next five characters are SPECIES_ID (eg. ELEMENT = 'BIRD' and SPECIES_ID = 1; EL_SPE = 'B00001').

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute Label: EL_SPE_SEA

Attribute Definition:

Concatenation of ELEMENT, SPECIES_ID, and SEASON_ID. This item links records in the BIORES data table to records in the SEASONAL and BREED data tables.

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: E#######

Enumerated Domain Value Definition:

Where E is the first character of ELEMENT, the next five characters are SPECIES_ID, and the last two characters are SEASON_ID (eg. ELEMENT = 'BIRD', SPECIES_ID = 1 and SEASON_ID = 1; EL_SPE_SEA = 'B0000101').

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

$Detailed_Description:$

Entity Type:

Entity_Type_Label: SPECIES

Entity Type Definition:

The data table SPECIES identifies all species in the ESI data set. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure. Refer to the Completeness_Report for a list of layer-specific species.

Entity_Type_Definition_Source: Research Planning, Inc.

Attribute:

Attribute Label: SPECIES_ID

Attribute Definition:

Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA.

Attribute_Definition_Source: Research Planning, Inc.

Attribute Domain Values:

Range_Domain:

Range Domain Minimum: 1 Range Domain Maximum: N Attribute Label: NAME Attribute Definition: Species common name Attribute Definition Source: Research Planning, Inc. Attribute Domain Values: Enumerated Domain: Enumerated Domain Value: Species common name for the entire ESI data set Enumerated Domain Value Definition: Free text Enumerated Domain Value Definition Source: Research Planning, Inc. Attribute Label: GEN_SPEC Attribute Definition: Species scientific name Attribute Definition Source: Research Planning, Inc. Attribute Domain Values: Enumerated Domain: Enumerated Domain Value: Species scientific name for the entire ESI data set. Enumerated Domain Value Definition: Free text Enumerated Domain Value Definition Source: Research Planning, Inc. Attribute Label: ELEMENT Attribute Definition: Major categories of biological data Attribute Definition Source: Research Planning, Inc. Attribute_Domain Values: Enumerated Domain: Enumerated Domain_Value: BIRD Enumerated Domain Value Definition: Birds Enumerated Domain Value Definition Source: Research Planning, Inc. Attribute Domain Values: Enumerated Domain: Enumerated Domain Value: FISH Enumerated Domain Value Definition: Fish Enumerated Domain Value Definition Source: Research Planning, Inc. Attribute Domain Values: Enumerated Domain: Enumerated Domain Value: HABITAT Enumerated Domain Value Definition: Habitats and plants Enumerated Domain Value Definition Source: Research Planning, Inc. Attribute Domain Values: Enumerated Domain: Enumerated Domain Value: INVERT Enumerated Domain Value Definition: Invertebrates Enumerated Domain Value Definition Source: Research Planning, Inc. Attribute Domain Values: Enumerated Domain: Enumerated Domain Value: M_MAMMAL Enumerated Domain Value Definition: Marine Mammals Enumerated Domain Value Definition Source: Research Planning, Inc. Attribute Domain Values: Enumerated Domain: Enumerated Domain Value: REPTILE Enumerated Domain Value Definition: Reptiles and Amphibians Enumerated Domain Value Definition Source: Research Planning, Inc. Attribute Domain Values: Enumerated Domain: Enumerated Domain Value: T_MAMMAL Enumerated Domain Value Definition: Terrestrial Mammals Enumerated Domain Value Definition Source: Research Planning, Inc. Attribute Label: SUBELEMENT Attribute Definition: Element subgroup delineating a logical grouping of species. Attribute Definition Source: Research Planning, Inc. Attribute Domain Values: Enumerated Domain:

Attribute:

Attribute:

Attribute:

Attribute:

Enumerated_Domain_Value: alcid Enumerated Domain Value Definition: Alcid

```
Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
            Enumerated Domain Value: bivalve
            Enumerated Domain Value Definition: Bivalve
            Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
            Enumerated Domain Value: crab
            Enumerated Domain Value Definition: Crab
            Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
            Enumerated Domain Value: diadromous
            Enumerated Domain Value Definition: Diadromous fish
            Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
            Enumerated Domain Value: diving
            Enumerated Domain Value Definition: Diving bird
            Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
            Enumerated Domain Value: e_nursery
            Enumerated Domain Value Definition: Estuarine nursery fish
            Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
            Enumerated Domain Value: gull_tern
            Enumerated Domain Value Definition: Gull or tern
            Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
            Enumerated Domain Value: m_benthic
            Enumerated Domain Value Definition: Marine benthic fish
            Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute_Domain_Values:
      Enumerated Domain:
            Enumerated Domain Value: m_pelagic
            Enumerated Domain Value Definition: Marine pelagic fish
            Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
            Enumerated Domain Value: pelagic
            Enumerated Domain Value Definition: Pelagic bird
            Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
            Enumerated Domain Value: pinniped
            Enumerated Domain Value Definition: Pinniped
            Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
            Enumerated Domain Value: sav
            Enumerated Domain Value Definition: Submersed aquatic vegetation
            Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
            Enumerated Domain Value: shorebird
            Enumerated Domain Value Definition: Shorebird
            Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
            Enumerated Domain Value: sea otter
            Enumerated Domain Value Definition: Otter
            Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Domain Values:
```

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Aleutian Islands Coastal Resources Inventory and
                   Enumerated Domain:
                          Enumerated Domain Value: waterfowl
                          Enumerated Domain Value Definition: Waterfowl
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
             Attribute Label: NHP
            Attribute Definition: Natural Heritage Program global ranking
            Attribute Definition Source: Network of Natural Heritage Program
             Attribute Domain Values:
                   Codeset Domain:
                         Codeset Name: NHP Global Conservation Status Rank
                         Codeset Source: Natural Heritage Program
      Attribute:
             Attribute Label: DATE_PUB
             Attribute Definition: Date of NHP listing
            Attribute Definition Source: Research Planning, Inc.
             Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: 0
                          Enumerated Domain Value Definition: Not ranked
                          Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: Numeric
                         Enumerated Domain Value Definition: mmyyyy
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
             Attribute Label: EL_SPE
            Attribute Definition:
                   Concatenation of ELEMENT and SPECIES_ID. This item links records in the SPECIES data table to records in
                   the BIORES and STATUS data tables.
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                          Enumerated Domain Value: E#####
                          Enumerated Domain Value Definition:
                                Where E is the first character of ELEMENT and the next five characters are SPECIES ID (eg.
                                ELEMENT = 'BIRD' and SPECIES_ID = 1; EL_SPE = 'B00001').
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
Detailed Description:
      Entity Type:
             Entity_Type_Label: SEASONAL
             Entity Type Definition:
                   The data table SEASONAL contains information on the seasonal presence of each species associated with each
                   spatial vector object. See the Browse_Graphic section for a link to the entity-relationship diagram, which
                   describes the way this table relates to other attribute tables in the ESI data structure.
             Entity Type Definition Source: Research Planning, Inc.
      Attribute:
             Attribute Label: ELEMENT
            Attribute Definition: Major categories of biological data
            Attribute Definition Source: Research Planning, Inc.
             Attribute Domain Values:
                   Enumerated Domain:
                          Enumerated Domain Value: BIRD
                          Enumerated Domain Value Definition: Birds
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
```

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: FISH

Enumerated Domain Value Definition: Fish

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: HABITAT

Enumerated Domain Value Definition: Habitats and plants

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

```
Enumerated Domain:
                   Enumerated Domain Value: INVERT
                   Enumerated Domain Value Definition: Invertebrates
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: M_MAMMAL
                   Enumerated Domain Value Definition: Marine Mammals
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: REPTILE
                   Enumerated Domain Value Definition: Reptiles and Amphibians
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: T_MAMMAL
                   Enumerated Domain Value Definition: Terrestrial Mammals
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: SPECIES_ID
      Attribute \begin{tabular}{c} - \\ Definition: \\ \end{tabular}
            Numeric identifier for each species that is unique within each element and refers to a nationwide ESI species list
            maintained at NOAA.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Range Domain:
                   Range Domain Minimum: 1
                   Range Domain Maximum: N
Attribute:
      Attribute Label: SEASON_ID
      Attribute Definition:
            Numeric identifier for the unique monthly presence and life history characteristics of each species at a given
            location.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Range Domain:
                  Range Domain Minimum: 1
                   Range Domain Maximum: N
Attribute:
      Attribute Label: JAN
      Attribute Definition: January
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in January
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: FEB
      Attribute Definition: February
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in February
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: MAR
      Attribute Definition: March
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in March
```

Enumerated Domain Value_Definition_Source: Research Planning, Inc.

Attribute:

```
Attribute Label: APR
      Attribute Definition: April
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: X
                   Enumerated_Domain_Value Definition: Present in April
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: MAY
      Attribute Definition: May
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in May
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: JUN
      Attribute Definition: June
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in June
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: JUL
      Attribute Definition: July
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in July
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: AUG
      Attribute Definition: August
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in August
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: SEP
      Attribute Definition: September
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in September
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: OCT
      Attribute Definition: October
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in October
                  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
      Attribute Label: NOV
      Attribute Definition: November
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
```

```
Enumerated Domain:
                  Enumerated Domain Value: X
Attribute:
      Attribute Label: DEC
      Attribute Domain Values:
            Enumerated Domain:
```

Enumerated Domain Value Definition: Present in November

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute_Definition: December

Attribute Definition Source: Research Planning, Inc.

Enumerated Domain Value: X

Enumerated Domain Value Definition: Present in December

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: EL SPE SEA

Attribute Definition:

Concatenation of ELEMENT, SPECIES_ID, and SEASON_ID. This item links records in the SEASONAL data table to records in the BIORES and BREED data tables.

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: E#######

Enumerated Domain Value Definition:

Where E is the first character of ELEMENT, the next five characters are SPECIES ID, and the last two characters are SEASON ID (eg. ELEMENT = 'BIRD', SPECIES ID = 1 and SEASON ID = 1; EL SPE SEA = 'B0000101').

Enumerated Domain Value Definition Source: Research Planning, Inc.

Detailed Description:

Entity Type:

Entity Type Label: BREED

Entity Type Definition:

The data table BREED identifies the monthly presence of certain life-history stages or activities for each species at a given location.

Entity Type Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: EL_SPE_SEA

Attribute Definition:

Concatenation of ELEMENT, SPECIES_ID, and SEASON_ID. This item links records in the BREED data table to records in the BIORES and SEASONAL data tables.

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: E#######

Enumerated Domain Value Definition:

Where E is the first character of ELEMENT, the next five characters are SPECIES_ID, and the last two characters are SEASON_ID (eg. ELEMENT = 'BIRD', SPECIES_ID = 1 and $SEASON_ID = 1$; $EL_SPE_SEA = 'B0000101'$).

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: MONTH

Attribute Definition:

Two-digit calendar month. Each life history stage or activity type for a particular species can have up to 12 records to account for each month of the year.

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Range Domain:

Range Domain Minimum: 1 Range Domain Maximum: 12

Attribute:

Attribute Label: BREED1

Attribute Definition:

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED1 = nesting; if ELEMENT is "FISH" then BREED1 = spawning; if ELEMENT is "INVERT" then BREED1 = spawning/mating; if

ELEMENT is "REPTILE" then BREED1 = nesting; if ELEMENT is "M_MAMMAL" then BREED1 = mating. This attribute is not used for HABITAT or T_MAMMAL elements.

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

```
Enumerated Domain Value: Y
```

Enumerated Domain Value Definition: Life-history stage or activity present

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: N

Enumerated Domain Value Definition: Life-history stage or activity not present

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: -

Enumerated_Domain_Value_Definition:

Breed category not used or not appropriate for record(s) in question

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: BREED2

Attribute Definition:

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED2 = laying; if ELEMENT is "FISH" then BREED2 = eggs; if ELEMENT is "INVERT" then BREED2 = eggs; if ELEMENT is "REPTILE" then BREED2 = hatching; if ELEMENT is "M_MAMMAL" then BREED2 = calving. This attribute is not used for HABITAT or T_MAMMAL elements.

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: Y

Enumerated Domain Value Definition: Life-history stage or activity present

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: N

Enumerated Domain Value Definition: Life-history stage or activity not present

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: -

Enumerated Domain Value Definition:

Breed category not used or not appropriate for record(s) in question

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: BREED3

Attribute_Definition:

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED3 = hatching; if ELEMENT is "FISH" then BREED3 = larvae; if ELEMENT is "INVERT" then BREED3 = larvae; if ELEMENT is

"REPTILE" then BREED3 = internesting; if ELEMENT is " M_MAMMAL " then BREED3 = pupping. This attribute is not used for HABITAT or T_MAMMAL elements.

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: Y

Enumerated Domain Value Definition: Life-history stage or activity present

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: N

Enumerated_Domain_Value_Definition: Life-history stage or activity not present

 ${\it Enumerated_Domain_Value_Definition_Source:} \ \ Research \ Planning, \ Inc.$

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: -

Enumerated Domain Value Definition:

Breed category not used or not appropriate for record(s) in question

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute_Label: BREED4

Attribute_Definition:

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED4 = fledging; if ELEMENT is "FISH" then BREED4 = juvenile; if ELEMENT is "INVERT" then BREED4 = juvenile; if ELEMENT is

```
"REPTILE" then BREED4 = juvenile; if ELEMENT is "M_MAMMAL" then BREED4 = molting. This
                   attribute is not used for HABITAT or T MAMMAL elements.
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: Y
                         Enumerated Domain Value Definition: Life-history stage or activity present
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: N
                         Enumerated Domain Value Definition: Life-history stage or activity not present
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: -
                         Enumerated Domain Value Definition:
                               Breed category not used or not appropriate for record(s) in question
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: BREED5
            Attribute Definition:
                   Life history stage or activity type, where: if ELEMENT is "FISH" then BREED5 = adults; if ELEMENT is
                   "INVERT" then BREED5 = adults; if ELEMENT is "REPTILE" then BREED5 = adults. This attribute is not
                   used for BIRD, M_MAMMAL, HABITAT, or T_MAMMAL elements.
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: Y
                         Enumerated Domain Value Definition: Life-history stage or activity present
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: N
                         Enumerated Domain Value Definition: Life-history stage or activity not present
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: -
                         Enumerated Domain Value Definition:
                               Breed category not used or not appropriate for record(s) in question
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
Detailed Description:
      Entity Type:
            Entity Type Label: SOURCES
             Entity Type Definition:
                   The data table SOURCES contains the primary sources used to create the ESI data set. See the Browse_Graphic
                   section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute
                   tables in the ESI data structure.
             Entity Type Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: SOURCE_ID
            Attribute Definition:
                   Source identifier that links records in the SOURCES data table to the items G SOURCE and A SOURCE in the
                   SOC_DAT table, and to G_SOURCE and S_SOURCE in the BIORES table.
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Range Domain:
                         Range Domain Minimum: 1
                         Range Domain Maximum: N
      Attribute:
            Attribute Label: ORIGINATOR
            Attribute Definition: Author or developer of source material or data set
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: Any character
```

```
Enumerated Domain Value Definition: Free text
                         Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
      Attribute:
             Attribute Label: DATE_PUB
            Attribute Definition:
                   Date of source material, publication, or date of personal communication with expert source
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: Numeric
                         Enumerated Domain Value Definition: mmyyyy
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
             Attribute Label: TITLE
            Attribute Definition: Title of source material or data
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: Any character
                         Enumerated Domain Value Definition: Free text
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
             Attribute Label: DATA_FORMAT
            Attribute_Definition: The format of the source material
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: Any character
                         Enumerated Domain Value Definition: Free text
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: PUBLICATION
            Attribute Definition: Additional citation information
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: Any character
                         Enumerated Domain Value Definition: Free text
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: SCALE
            Attribute Definition: Scale denominator of the source
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: integer
                         Enumerated Domain Value Definition: Any integer
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
             Attribute Label: TIME_PERIOD
            Attribute Definition:
                   Date(s) of data collection that the source material is based upon.
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: Numeric
                         Enumerated Domain Value Definition: yyyy
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
Detailed Description:
      Entity_Type:
            Entity_Type_Label: STATUS
             Entity Type Definition:
                   The data table STATUS identifies the species that are listed as either threatened or endangered by a state or
                   federal authority. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes
                   the way this table relates to other attribute tables in the ESI data structure.
             Entity Type Definition_Source: Research Planning, Inc.
      Attribute:
```

```
Attribute Label: ELEMENT
      Attribute Definition: Major categories of biological data
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: BIRD
                  Enumerated Domain Value Definition: Birds
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: FISH
                  Enumerated Domain Value Definition: Fish
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated_Domain Value: HABITAT
                  Enumerated Domain Value Definition: Habitats and Plants
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: INVERT
                  Enumerated Domain Value Definition: Invertebrates
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain_Value: M_MAMMAL
                  Enumerated Domain Value Definition: Marine Mammals
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: REPTILE
                  Enumerated Domain Value Definition: Reptiles and Amphibians
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: T_MAMMAL
                  Enumerated_Domain_Value_Definition: Terrestrial Mammals
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: SPECIES_ID
      Attribute Definition:
            Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI
            species list maintained at NOAA
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Range Domain:
                  Range Domain Minimum: 1
                  Range Domain Maximum: N
Attribute:
      Attribute Label: STATE
      Attribute Definition: Two-letter state abbreviation
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: Any character
                  Enumerated Domain Value Definition: Two-letter state abbreviation
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: S F
      Attribute Definition: State and Federal status.
      Attribute_Definition_Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: F
                  Enumerated Domain Value Definition: Federally listed
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
```

Attribute Domain Values:

```
Enumerated Domain:
                               Enumerated Domain Value: S
                               Enumerated Domain Value Definition: State listed
                               Enumerated Domain Value Definition Source: Research Planning, Inc.
                  Attribute Domain Values:
                         Enumerated Domain:
                               Enumerated Domain Value: S/F
                               Enumerated Domain Value Definition: State and federally listed
                               Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute:
                  Attribute Label: T E
                  Attribute Definition: Threatened and endangered status.
                  Attribute Definition Source: Research Planning, Inc.
                  Attribute Domain Values:
                         Enumerated Domain:
                               Enumerated Domain Value: E
                               Enumerated Domain Value Definition: Endangered on state or federal list
                               Enumerated Domain Value Definition Source: U.S. Fish and Wildlife Service
                  Attribute Domain Values:
                         Enumerated Domain:
                               Enumerated Domain Value: T
                               Enumerated Domain Value Definition: Threatened on state or federal list
                               Enumerated Domain Value Definition Source: U.S. Fish and Wildlife Service
            Attribute:
                  Attribute Label: DATE_PUB
                  Attribute Definition:
                         Publication date of source material used to assign state and federal status values for each species, if used.
                  Attribute Definition Source: Research Planning, Inc.
                  Attribute Domain Values:
                         Enumerated Domain:
                               Enumerated Domain Value: Numeric
                               Enumerated Domain Value Definition: mmyyyy
                               Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute:
                   Attribute_Label: EL_SPE
                  Attribute Definition:
                         Concatenation of ELEMENT and SPECIES ID. This item links the STATUS data table to the BIORES and
                         SPECIES data tables.
                  Attribute Definition Source: Research Planning, Inc.
                  Attribute Domain Values:
                         Enumerated Domain:
                               Enumerated Domain Value: E#####
                               Enumerated Domain Value_Definition:
                                      Where E is the first character of ELEMENT and the next five characters are SPECIES_ID (eg.
                                      ELEMENT = 'BIRD' and SPECIES_ID = 1; EL_SPE = 'B00001').
                               Enumerated Domain Value Definition Source: Research Planning, Inc.
Distribution Information:
      Distributor:
            Contact Information:
                   Contact Person Primary:
                         Contact Person: John Kaperick
                         Contact Organization: NOAA, Office of Response and Restoration
                   Contact Address:
                         Address Type: Physical Address
                         Address: 7600 Sand Point Way, N.E.
                         City: Seattle
                         State or Province: Washington
```

Resource_Description: ESI Atlas for the Aleutian Islands
Distribution_Liability:

Postal_Code: 98115-6349 Contact_Voice_Telephone: (206) 526-6400 Contact_Facsimile_Telephone: (206) 526-6329

Although these data have been processed successfully on a computer system at the National Oceanic and Atmospheric Administration, no warranty, expressed or implied, is made by NOAA regarding the utility of the data on any other system,

nor shall the act of distribution constitute any such warranty. NOAA warrants the delivery of this product in computer-readable format, and will offer a replacement copy of the product when the product is determined unreadable by computer-input peripherals, or when the physical medium is delivered in damaged condition.

Custom Order Process:

Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to a wider community of GIS/mapping users. Distribution formats include ARC export, MOSS and Shape files, and MARPLOT map folders. An ArcView ESI project and ESI_Viewer product are also included on the distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

```
Metadata Reference Information:
      Metadata Date: 200205
      Metadata Review Date: 200205
      Metadata Contact:
            Contact Information:
                  Contact Person Primary:
                         Contact Person: Jill Petersen
                         Contact Organization: NOAA, Office of Response and Restoration
                  Contact Position: GIS Manager
                  Contact Address:
                         Address Type: Physical Address
                         Address: 7600 Sand Point Way, N.E.
                         City: Seattle
                         State or Province: Washington
                         Postal Code: 98115-6349
                  Contact Voice Telephone: (206) 526-6944
                  Contact Facsimile Telephone: (206) 526-6329
                  Contact Electronic Mail Address: Jill.Petersen@noaa.gov
     Metadata Standard Name: Content Standards for Digital Geospatial Metadata
      Metadata Standard Version: FGDC-STD-001-1998
```

Generated by mp version 2.7.23 on Thu May 16 15:11:38 2002

Aleutian Islands Coastal Resources Inventory and Environmental Sensitivity Maps: FISH (Fish Polygons)

Metadata also available as - [Parseable text] - [SGML]

Metadata:

- Identification Information
- Data Quality Information
- Spatial Data Organization Information
- Spatial Reference Information
- Entity and Attribute Information
- <u>Distribution Information</u>
- Metadata Reference Information

Identification Information:

Citation:

Citation Information:

Originator:

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Prince William Sound Oil Spill Recovery Institute; Aleutians West Coastal Resource Service Area (CRSA); Aleutians East Borough; Alaska Chadux Corporation; United States Coast Guard; and National Fish & Wildlife Foundation.

Publication Date: 200205

Title:

Aleutian Islands Coastal Resources Inventory and Environmental Sensitivity Maps: FISH (Fish Polygons)

Edition: First

Geospatial Data Presentation Form: Digital vector data

Series Information:

Series Name: None

Issue Identification: Aleutian Islands

Publication Information:

Publication_Place: Seattle, Washington

Publisher:

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington

Other Citation Details:

Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Prince William Sound Oil Spill Recovery Institute; Aleutians West Coastal Resource Service Area (CRSA); Aleutians East Borough; Alaska Chadux Corporation; United States Coast Guard; and National Fish & Wildlife Foundation.

Description:

Abstract:

This data set contains biological resource data for estuarine, benthic, and pelagic fish in the Aleutian Islands, Alaska. Vector polygons in this data set represent locations of fish concentration areas. Species-specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for Aleutians East Borough and Aleutians West Coastal Resource Service Area (CRSA). These data identify the marine and coastal environments and wildlife. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources. See also the FISHL (Fish Lines) data layer, part of the larger Aleutians East/Aleutians West ESI database, for additional fish information.

Purpose.

The ESI data were collected, mapped, and digitized to provide environmental data for oil spill planning and response. The Clean Water Act with amendments by the Oil Pollution Act of 1990 requires response plans for immediate and effective protection of sensitive resources.

Time_Period_of_Content:

Time Period Information:

Range of Dates/Times:

Beginning_Date: 2000 Ending Date: 2001

Currentness Reference:

The biological data were compiled during 2000-2001. The currentness dates for these data range from 1982 to 2001 and are documented in the Source Information section.

Status:

Progress: Complete

Maintenance and Update Frequency: None Scheduled

Spatial Domain:

Bounding Coordinates:

West_Bounding_Coordinate: 172.42000 East_Bounding_Coordinate: -158.81002 North_Bounding_Coordinate: 58.133120 South_Bounding_Coordinate: 48.351629

Keywords:

Theme:

Theme Keyword Thesaurus: None

Theme Keyword: ESI

Theme_Keyword: Sensitivity maps Theme_Keyword: Coastal resources Theme_Keyword: Oil spill planning

Theme_Keyword: Coastal Zone Management

Theme_Keyword: Wildlife Theme_Keyword: Fish

Place:

Place Keyword Thesaurus: None Place Keyword: Aleutian Islands

Access Constraints: None

Use Constraints:

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

Browse Graphic:

Browse_Graphic_File_Name: datafig.jpg Browse Graphic File Description:

Relationships between spatial data layers and attribute data tables for the Aleutian Islands ESI data.

Browse Graphic File Type: JPEG

Data_Set_Credit:

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Prince William Sound Oil Spill Recovery Institute; Aleutians West Coastal Resource Service Area (CRSA); Aleutians East Borough; Alaska Chadux Corporation; United States Coast Guard; and National Fish & Wildlife Foundation.

Native Data Set Environment:

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.0.2) and ORACLE(r) RDBMS (version 8.0.5.0.0). The hardware configuration is Hewlett Packard workstations (models 715/50 and 712/80i) with UNIX operating system (HP-UX Release A.10.20), and PC's with Windows Operating System (NT4.0/2000). The Spatial_Data_Organization Information section refers only to the source files in the ARC export format. The following files are included in that data set: birds.e00, bio_lut.e00, biofile.e00, biores.e00, breed_e00, breed_dt.e00, esi.e00, faults.e00, fishl.e00, fishl.e00, geo.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, m_mampt.e00, mgt.e00, nests.e00, seasonal.e00, soc_dat.e00, soc_lut.e00, socecon.e00, sources.e00, species.e00, status.e00, volcanos.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biofile, biores, breed_dt, seasonal, soc_dat, soc_lut, socecon, sources, species, and status.

Data_Quality_Information:

Attribute Accuracy:

Attribute Accuracy Report:

A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.

Logical Consistency Report:

A multi-stage error checking process, described in the above Attribute_Accuracy_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles,

unnecessary node, etc.), and ORACLE(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks. In the process of checking for topological and database consistencies, new ID's and RARNUM's or HUNUM's are also generated. The new ID's are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon, a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "resources at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

Completeness Report:

These data represent a synthesis of expert knowledge and available hardcopy reports and digital data on fish concentration areas. Refer to the FISHL (Fish Lines) data layer for additional anadromous fish information. These data do not necessarily represent all fish occurrences in the Aleutian Islands, Alaska. The following species are included in this data set (Species_ID, Common Name, Scientific Name, if applicable): 1, Sablefish (blackcod), Anoplopoma fimbria; 4, Arrowtooth flounder, Atheresthes stomias; 7, Pacific halibut, Hippoglossus stenolepis; 9, Rock sole, Lepidopsetta bilineata; 16, Flathead sole, Hippoglossoides elassodon; 19, Pacific cod, Gadus macrocephalus; 22, Walleye pollock, Theragra chalcogramma; 66, Pacific herring, Clupea pallasi; 459, Alaska plaice, Pleuronectes quadrituberculatus; 460, Greenland halibut (turbot), Reinhardtius hippoglossoides; 461, Yellowfin sole, Pleuronectes asper; 636, Atka mackerel, Pleurogrammus monopterygius.

Positional Accuracy:

Horizontal Positional Accuracy:

Horizontal Positional Accuracy Report:

Some of the spatial components of the biological data sets are developed using regional experts who estimate concentration areas. It is difficult to estimate the positional accuracy of such data, except to state that they are compiled on hardcopy basemaps with a scale of 1:250,000. Most of the spatial components of the biological data sets are developed from pre-existing digital sources and reflect the positional accuracy of these original data. See the Lineage and Process_Description sections for more information on the original data source and how these data were integrated or manipulated to create the final data set. Note that biological resource data by their very nature are considered "fuzzy", and this should be understood when considering the positional accuracy of vector digital objects representing these resources.

Lineage:

```
Source Information:
      Source Citation:
             Citation Information:
                    Originator: Mark Fink, Alaska Department of Fish and Game
                    Publication Date: Unpublished material
                    Title: Most Environmentally Sensitive Areas
                    Geospatial Data Presentation Form: Hardcopy Map
      Source Scale Denominator: 250000
       Type of Source Media: Electronic mail service
       Source Time Period of Content:
             \overline{T}ime \overline{P}eriod \overline{I}nformation:
                    Single Date/Time:
                           Calendar Date: 2000
             Source Currentness Reference: Date of study
      Source Citation Abbreviation: None
      Source Contribution: Fish Information
Source Information:
      Source Citation:
             Citation Information:
                    Originator: Alaska Department of Fish and Game
                    Publication Date: 1984
                    Title: Habitat Management Guides
                    Geospatial Data Presentation Form: Hardcopy Map
                    Publication Information:
                           Publication Place: Anchorage, Alaska
                           Publisher: Alaska Department of Fish and Game
      Source_Scale Denominator: 250000
       Type of Source Media: Paper
       Source Time Period of Content:
             \overline{T}ime \overline{P}eriod\overline{I}nf\overline{o}rmation:
                    Single Date/Time:
```

Calendar Date: 1982 Source Currentness Reference: Date of study

Source_Citation_Abbreviation: None Source_Contribution: Fish Information

Source Information:

Source Citation:

```
Citation Information:
```

Originator: National Marine Fisheries Service Publication_Date: Unpublished material

Title: Essential Fish Habitats

Geospatial_Data_Presentation_Form: Digital Table

Type_of_Source_Media: Online
Source_Time_Period_of_Content:
 Time_Period_Information:
 Single_Date/Time:

Calendar Date: 1999

Source Currentness Reference: Date of study

Source_Citation_Abbreviation: None Source_Contribution: Fish Information

Source Information:

Source Citation:

Citation Information:

Originator: Aleutians West CRSA
Publication_Date: Unpublished material
Title: Coastal Zone Management Plan

Geospatial_Data_Presentation_Form: Hardcopy Map

Source_Scale_Denominator: 500000
Type_of_Source_Media: Paper
Source_Time_Period_of_Content:
 Time_Period_Information:
 Single_Date/Time:

Source Currentness Reference: Date of study

Source_Citation_Abbreviation: None Source Contribution: Fish Information

Process Step:

Process Description:

Data used to depict fish distribution for this data layer came from several sources: personal interviews with resource experts from the National Marine Fisheries Service (NMFS) in Anchorage, and with locals having expert knowledge; Alaska Dept. of Fish and Game's Most Environmentally Sensitive Areas maps and Habitat Management Guides; and Aleutians East and West Coastal Resource Service Area (CRSA) management plan. Information gathered from the interviews and maps were compiled onto 1:250,000 scale U.S. Geological Survey (USGS) topographic maps. Digital data were transposed by hand onto the topographic maps since the format in which they were received was not compatible with the ESI data format. Following the data compilation phase, several sets of completed maps were sent out to the resource agencies for review, and edits were made based on recommendations by the resource experts. Only areas of high fish concentration were included in this data layer.

Process_Date: 200111
Process Contact:

Contact Information:

Contact Organization Primary:

Contact_Organization: NOAA, Office of Response and Restoration

Contact Person: Jill Petersen

Contact_Address:

Address_Type: Physical address Address: 7600 Sand Point Way, N.E.

City: Seattle

State_or_Province: Washington Postal_Code: 98115-6349

Contact_Voice_Telephone: (206) 526-6944 Contact_Facsimile_Telephone: (206) 526-6329

Contact Electronic Mail Address: Jill.Petersen@noaa.gov

Spatial Data Organization Information:

Direct Spatial Reference Method: Vector

Point and Vector Object Information:

SDTS_Terms_Description:

SDTS Point and Vector Object Type: GT-polygon composed of rings

Point and Vector Object Count: 1640

SDTS Terms Description:

SDTS Point and Vector Object Type: Area point

Point and Vector Object Count: 1640

SDTS Terms Description:

SDTS Point and Vector Object Type: Complete chain

Point and Vector Object Count: 4446

SDTS Terms Description:

SDTS_Point_and_Vector_Object_Type: Link Point and Vector Object Count: 1386405

SDTS Terms Description:

SDTS Point and Vector Object Type: Node, planar graph

Point and Vector Object Count: 4400

Spatial Reference Information:

Horizontal Coordinate System Definition:

Geographic:

Latitude_Resolution: 0.00005 Longitude Resolution: 0.00005

Geographic Coordinate Units: Decimal degrees

Geodetic Model:

Horizontal Datum Name: North American Datum of 1927

Ellipsoid_Name: Clark 1866 Semi-major Axis: 6378206.4

Denominator_of_Flattening_Ratio: 294.978698

Entity_and_Attribute_Information:

Overview Description:

Entity and Attribute Overview:

In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, FISH) is linked to the Biological Resources table (BIORES) using the unique ID and the lookup table BIO_LUT, or it can be linked directly using RARNUM. The ID is a unique combination of the atlas number (for the Aleutian Islands atlas, the number is 72) an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described below in detail. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure. Due to the complexity of the relational database model, the data items are also post-processed into a flat file format. This table, called BIOFILE, may be used in place of the relational files described below to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN_SPEC, S_F, T_E, NHP, DATE_PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G_SOURCE, S_SOURCE, and BREED. All of these items are the same as their counterparts in the individual data tables described below, except the BREED1-BREED5 and BREED items. BREED is a newly generated variable used to link to the BREED_DT data table, a modified, more compact version of the relational BREED data table. BREED1-BREED5 give a text summary of when each life stage occurs within the associated map object. The life stages referred to are the same as those listed in the Detailed Description of the BREED data table. The link to the BIOFILE may be made through the BIO LUT, using ID to link to RARNUM, or BIOFILE may be linked directly to the RARNUM in each of the geographic layer's attribute data tables. As mentioned, BREED DT is an auxiliary support data table to the flat file structure, which allows the user to do searches based on month for seasonal breeding activities. The link from the flat file to BREED DT is the BREED item. A second supporting data table is SOURCES. This is the same as the source file described above, and the link from the flat file is both G SOURCE and S SOURCE. It should be noted that although the flat file eases data query, it is not a normalized database structure, and actual updates performed by the states and other responsible agencies should be done using the relational data tables. The entity-relationship diagram describing relationships between attribute tables in the ESI data structure does NOT include the BIOFILE data table, and this data table is NOT described in detail below.

Detailed Description:

Entity_Type:

Entity_Type_Label: FISH.PAT

Entity_Type_Definition:

The FISH.PAT table contains attribute information for the vector polygons representing fish concentration areas. Note that all attribute information is stored in a series of relational files, described below. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.

Entity Type Definition Source: Research Planning, Inc.

Attribute:

Attribute_Label: ID Attribute_Definition:

An identifier that links vector objects in the biology data layers to records in the BIO_LUT data table. ID is a concatenation of atlas number (72), element number (2), and record number. ID values of 9999 are holes in polygons and do not contain information.

Attribute Definition Source: NOAA

Attribute_Domain_Values:

Range Domain:

Range Domain Minimum: 720200002 Range Domain Maximum: 720200437

Attribute:

Attribute Label: RARNUM

Attribute Definition:

An identifier that links directly to the BIORES table or the flat format BIOFILE table. RARNUM values of 0 are holes in the polygons and do not contain information.

Attribute Definition Source: NOAA

Attribute Domain Values:

Range Domain:

Range_Domain_Minimum: 72000425 Range_Domain_Maximum: 72000569

Detailed Description:

Entity_Type:

Entity_Type_Label: BIO_LUT

Entity_Type_Definition:

The data table BIO_LUT is a lookup table that contains items necessary for linking vector objects in the biological data layers with the BIORES data table. Note that all attribute information is stored in a series of relational files, described below. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

Entity Type Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: RARNUM

Attribute Definition:

An identifier that links records in the BIO_LUT data table to records in the BIORES data table or the flat format BIOFILE data table. RARNUM values of 0 are holes in the polygons and do not contain information.

Attribute Definition Source: NOAA

Attribute_Domain_Values:

Range Domain:

Range_Domain_Minimum: 72000001 Range_Domain_Maximum: 72000615

Attribute:

Attribute_Label: ID Attribute Definition:

An identifier that links vector objects in the biology data layers to records in the BIO_LUT data table. ID is a concatenation of atlas number (72), element number (2), and record number. ID values of 9999 are holes in polygons and do not contain information.

Attribute_Definition Source: NOAA

Attribute Domain Values:

Range_Domain:

Range_Domain_Minimum: 720100002 Range_Domain_Maximum: 723400623

 $Detailed_Description:$

Entity Type:

Entity_Type_Label: BIORES

Entity Type Definition:

The data table BIORES contains both biological attribute data and items necessary for linking vector objects in the biological data layers via the BIO_LUT data table to other associated data tables. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

Entity Type Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: RARNUM

Attribute Definition:

An identifier that links records in the BIORES data table to records in the BIO_LUT data table or the flat format BIOFILE data table.

Attribute Definition Source: NOAA

Attribute Domain Values:

Range Domain:

Range Domain Minimum: 072000001

Aleutian Islands Coastal Resources Inventory and Environmental Sensitivity Maps: FISH (Fish Polygons) Range Domain Maximum: 072000615 Attribute: Attribute Label: SPECIES ID Attribute Definition: Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA. Attribute Definition Source: Research Planning, Inc. Attribute Domain Values: Range Domain: Range Domain Minimum: 1 Range Domain Maximum: N Attribute: Attribute Label: CONC Attribute Definition: The field CONC refers to "concentration," abundance, or density values. In the FISH data layer, the CONC field contains only the descriptive term "HIGH," because only high concentration areas of fish were mapped. Attribute Definition Source: Research Planning, Inc. Attribute Domain Values: Enumerated Domain: Enumerated Domain Value: Any character Enumerated Domain Value Definition: Free text Enumerated Domain Value Definition Source: Research Planning, Inc. Attribute: Attribute Label: SEASON_ID Attribute Definition: Numeric identifier for the unique monthly presence and life history characteristics of each species at a given Attribute Definition Source: Research Planning, Inc. Attribute Domain Values: Range Domain: Range Domain Minimum: 1 Range Domain Maximum: N Attribute: Attribute Label: G_SOURCE Attribute Definition: Geographic source identifier that links records in the BIORES data table to records in the SOURCES data table. Attribute Definition Source: Research Planning, Inc. Attribute Domain Values: Range Domain: Range Domain Minimum: 1 Range Domain Maximum: N Attribute: Attribute Label: S_SOURCE Attribute Definition: Seasonality source identifier that links records in the BIORES data table to records in the SOURCES data table. Attribute Definition Source: Research Planning, Inc. Attribute Domain Values: Range Domain: Range Domain Minimum: 1 Range Domain Maximum: N Attribute: Attribute Label: ELEMENT Attribute Definition: Major categories of biological data Attribute Definition Source: Research Planning, Inc. Attribute Domain Values: Enumerated Domain: Enumerated Domain Value: BIRD Enumerated Domain Value Definition: Birds Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain Value Definition Source: Research Planning, Inc. Attribute Domain Values: Enumerated Domain: Enumerated Domain Value: HABITAT

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: FISH

Enumerated Domain Value Definition: Fish

```
Enumerated Domain Value Definition: Habitats and plants
```

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: INVERT

Enumerated_Domain_Value_Definition: Invertebrates

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated Domain:

Enumerated Domain Value: M MAMMAL

Enumerated Domain Value Definition: Marine mammals

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: REPTILE

Enumerated Domain Value Definition: Reptiles and Amphibians

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: T MAMMAL

Enumerated Domain Value Definition: Terrestrial mammals

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: EL_SPE

Attribute Definition:

Concatenation of ELEMENT and SPECIES_ID. This item links records in the BIORES data table to records in the SPECIES and STATUS data tables.

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: E#####

Enumerated_Domain_Value_Definition:

Where E is the first character of ELEMENT and the next five characters are SPECIES_ID (eg. ELEMENT = 'BIRD' and SPECIES_ID = 1; EL_SPE = 'B00001').

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: EL_SPE_SEA

Attribute_Definition:

Concatenation of ELEMENT, SPECIES_ID, and SEASON_ID. This item links records in the BIORES data table to records in the SEASONAL and BREED data tables.

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: E#######

Enumerated Domain Value Definition:

Where E is the first character of ELEMENT, the next five characters are SPECIES_ID, and the last two characters are SEASON_ID (eg. ELEMENT = 'BIRD', SPECIES_ID = 1 and SEASON_ID = 1; EL_SPE_SEA = 'B0000101').

Enumerated Domain Value Definition Source: Research Planning, Inc.

Detailed Description:

Entity_Type:

Entity Type Label: SPECIES

Entity Type Definition:

The data table SPECIES identifies all species in the ESI data set. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure. Refer to the Completeness_Report for a list of layer-specific species.

Entity Type Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: SPECIES_ID

Attribute Definition:

Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA.

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Range_Domain:

```
Attribute:
      Attribute Label: NAME
      Attribute Definition: Species common name
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: Species common name for the entire ESI data set
                  Enumerated Domain Value Definition: Free text
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: GEN SPEC
      Attribute Definition: Species scientific name
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: Species scientific name for the entire ESI data set.
                  Enumerated_Domain_Value_Definition: Free text
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: ELEMENT
      Attribute Definition: Major categories of biological data
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: BIRD
                  Enumerated Domain Value Definition: Birds
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: FISH
                  Enumerated Domain Value Definition: Fish
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: HABITAT
                  Enumerated Domain Value Definition: Habitats and plants
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: INVERT
                  Enumerated Domain Value Definition: Invertebrates
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: M_MAMMAL
                  Enumerated Domain Value Definition: Marine Mammals
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: REPTILE
                  Enumerated Domain Value Definition: Reptiles and Amphibians
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: T_MAMMAL
                  Enumerated Domain Value Definition: Terrestrial Mammals
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: SUBELEMENT
```

Attribute Definition: Element subgroup delineating a logical grouping of species

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated_Domain:

Enumerated Domain Value: alcid

Enumerated_Domain_Value_Definition: Alcid

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute Domain Values:

```
Enumerated Domain:
```

Enumerated Domain Value: bivalve

Enumerated Domain Value Definition: Bivalve

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: crab

Enumerated_Domain_Value_Definition: Crab

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: diadromous

Enumerated Domain Value Definition: Diadromous fish

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated Domain:

Enumerated_Domain_Value: diving

Enumerated_Domain_Value_Definition: Diving bird

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: e_nursery

Enumerated Domain Value Definition: Estuarine nursery fish

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: gull_tern

Enumerated Domain Value Definition: Gull or tern

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated Domain:

Enumerated Domain Value: m_benthic

Enumerated Domain Value Definition: Marine benthic fish

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated Domain:

Enumerated_Domain_Value: m_pelagic

Enumerated Domain Value Definition: Marine pelagic fish

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: pelagic

Enumerated Domain Value Definition: Pelagic bird

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: pinniped

Enumerated Domain Value Definition: Pinniped

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: sav

Enumerated Domain Value Definition: Submersed aquatic vegetation

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: shorebird

Enumerated_Domain_Value_Definition: Shorebird

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: sea_otter

Enumerated Domain Value Definition: Otter

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated_Domain_Value: waterfowl

```
Enumerated Domain Value Definition: Waterfowl
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
             Attribute Label: NHP
            Attribute Definition: Natural Heritage Program global ranking
            Attribute Definition Source: Network of Natural Heritage Program
            Attribute Domain Values:
                   Codeset Domain:
                         Codeset Name: NHP Global Conservation Status Rank
                         Codeset Source: Natural Heritage Program
      Attribute:
            Attribute Label: DATE PUB
            Attribute Definition: Date of NHP listing
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: 0
                         Enumerated Domain Value Definition: Not ranked
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: Numeric
                         Enumerated Domain Value Definition: mmyyyy
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: EL_SPE
            Attribute_Definition:
                   Concatenation of ELEMENT and SPECIES ID. This item links records in the SPECIES data table to records in
                   the BIORES and STATUS data tables.
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: E#####
                         Enumerated Domain Value Definition:
                               Where E is the first character of ELEMENT and the next five characters are SPECIES_ID (eg.
                               ELEMENT = 'BIRD' and SPECIES_ID = 1; EL_SPE = 'B00001').
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
Detailed Description:
      Entity Type:
            Entity Type Label: SEASONAL
            Entity_Type Definition:
                   The data table SEASONAL contains information on the seasonal presence of each species associated with each
                   spatial vector object. See the Browse Graphic section for a link to the entity-relationship diagram, which
                   describes the way this table relates to other attribute tables in the ESI data structure.
             Entity Type Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: ELEMENT
            Attribute Definition: Major categories of biological data
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: BIRD
                         Enumerated Domain Value Definition: Birds
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: FISH
                         Enumerated Domain Value Definition: Fish
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: HABITAT
                         Enumerated Domain Value Definition: Habitats and plants
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain_Value: INVERT
```

```
Enumerated Domain Value Definition: Invertebrates
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: M_MAMMAL
                   Enumerated Domain Value Definition: Marine Mammals
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: REPTILE
                   Enumerated Domain Value Definition: Reptiles and Amphibians
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: T MAMMAL
                   Enumerated Domain Value Definition: Terrestrial Mammals
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: SPECIES_ID
      Attribute Definition:
            Numeric identifier for each species that is unique within each element and refers to a nationwide ESI species list
            maintained at NOAA.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Range Domain:
                  Range Domain Minimum: 1
                  Range Domain Maximum: N
Attribute:
      Attribute Label: SEASON_ID
      Attribute Definition:
            Numeric identifier for the unique monthly presence and life history characteristics of each species at a given
            location.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Range Domain:
                  Range Domain Minimum: 1
                  Range Domain Maximum: N
Attribute:
      Attribute Label: JAN
      Attribute Definition: January
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in January
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: FEB
      Attribute Definition: February
      Attribute Definition Source: Research Planning, Inc.
      Attribute_Domain_Values:
            Enumerated Domain:
                  Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in February
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: MAR
      Attribute Definition: March
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in March
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: APR
```

Attribute Definition: April

```
Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in April
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: MAY
      Attribute Definition: May
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in May
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: JUN
      Attribute Definition: June
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in June
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: JUL
      Attribute Definition: July
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in July
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: AUG
      Attribute Definition: August
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in August
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: SEP
      Attribute Definition: September
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in September
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: OCT
      Attribute Definition: October
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in October
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: NOV
      Attribute Definition: November
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: X
```

```
Aleutian Islands Coastal Resources Inventory and
                                                                                    Environmental Sensitivity Maps: FISH (Fish Polygons)
             Enumerated Domain Value Definition: Present in November
             Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Label: DEC
Attribute Definition: December
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
             Enumerated Domain Value: X
             Enumerated Domain Value Definition: Present in December
             Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Label: EL_SPE_SEA
Attribute Definition:
      Concatenation of ELEMENT, SPECIES ID, and SEASON ID. This item links records in the SEASONAL data
      table to records in the BIORES and BREED data tables.
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
             Enumerated Domain Value: E######
             Enumerated Domain Value Definition:
                   Where E is the first character of ELEMENT, the next five characters are SPECIES_ID, and the
                   last two characters are SEASON_ID (eg. ELEMENT = 'BIRD', SPECIES_ID = 1 and
                   SEASON_ID = 1; EL_SPE_SEA = 'B0000101').
             Enumerated Domain Value Definition Source: Research Planning, Inc.
Entity Type Label: BREED
Entity Type Definition:
      The data table BREED identifies the monthly presence of certain life-history stages or activities for each species
      at a given location.
Entity Type Definition Source: Research Planning, Inc.
Attribute Label: EL_SPE_SEA
Attribute Definition:
      Concatenation of ELEMENT, SPECIES ID, and SEASON ID. This item links records in the BREED data
      table to records in the BIORES and SEASONAL data tables.
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values:
      \bar{Enumerated} Domain:
             Enumerated Domain Value: E######
             Enumerated Domain Value Definition:
                   Where E is the first character of ELEMENT, the next five characters are SPECIES ID, and the
                   last two characters are SEASON ID (eg. ELEMENT = 'BIRD', SPECIES ID = 1 and
                   SEASON ID = 1; EL SPE SEA = 'B0000101').
             Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Label: MONTH
Attribute Definition:
      Two-digit calendar month. Each life history stage or activity type for a particular species can have up to 12
      records to account for each month of the year.
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Range Domain:
             Range Domain Minimum: 1
             Range Domain Maximum: 12
Attribute Label: BREED1
Attribute Definition:
      Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED1 = nesting; if ELEMENT is
      "FISH" then BREED1 = spawning; if ELEMENT is "INVERT" then BREED1 = spawning/mating; if
      ELEMENT is "REPTILE" then BREED1 = nesting; if ELEMENT is "M_MAMMAL" then BREED1 = mating.
```

Attribute Definition Source: Research Planning, Inc. Attribute Domain Values:

Attribute:

Attribute:

Detailed Description: Entity Type:

Attribute:

Attribute:

Attribute:

Enumerated Domain:

Enumerated Domain Value: Y

This attribute is not used for HABITAT or T_MAMMAL elements.

Enumerated Domain Value Definition: Life-history stage or activity present

```
Aleutian Islands Coastal Resources Inventory and
                                                                                            Environmental Sensitivity Maps: FISH (Fish Polygons)
              Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Domain Values:
       Enumerated Domain:
              Enumerated Domain Value: N
              Enumerated Domain Value Definition: Life-history stage or activity not present
              Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Domain Values:
       Enumerated Domain:
              Enumerated Domain Value: -
              Enumerated Domain Value Definition:
                     Breed category not used or not appropriate for record(s) in question
              Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Label: BREED2
Attribute Definition:
       Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED2 = laying; if ELEMENT is
       "FISH" then BREED2 = eggs; if ELEMENT is "INVERT" then BREED2 = eggs; if ELEMENT is "REPTILE" then BREED2 = hatching; if ELEMENT is "M_MAMMAL" then BREED2 = calving. This attribute is not used
       for HABITAT or T_MAMMAL elements.
Attribute Definition_Source: Research Planning, Inc.
Attribute Domain Values:
       Enumerated Domain:
              Enumerated Domain Value: Y
              Enumerated Domain Value Definition: Life-history stage or activity present
              Enumerated Domain Value Definition Source: Research Planning, Inc.
       Enumerated Domain:
              Enumerated Domain Value: N
              Enumerated Domain Value Definition: Life-history stage or activity not present
```

Attribute Domain Values:

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: -

Enumerated Domain Value Definition:

Breed category not used or not appropriate for record(s) in question

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute:

Attribute Label: BREED3

Attribute Definition:

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED3 = hatching; if ELEMENT is "FISH" then BREED3 = larvae; if ELEMENT is "INVERT" then BREED3 = larvae; if ELEMENT is "REPTILE" then BREED3 = internesting; if ELEMENT is "M_MAMMAL" then BREED3 = pupping. This attribute is not used for HABITAT or T_MAMMAL elements.

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: Y

Enumerated Domain Value Definition: Life-history stage or activity present

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: N

Enumerated Domain Value Definition: Life-history stage or activity not present

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: -

Enumerated Domain Value Definition:

Breed category not used or not appropriate for record(s) in question Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: BREED4

Attribute Definition:

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED4 = fledging; if ELEMENT is "FISH" then BREED4 = juvenile; if ELEMENT is "INVERT" then BREED4 = juvenile; if ELEMENT is "REPTILE" then BREED4 = juvenile; if ELEMENT is "M_MAMMAL" then BREED4 = molting. This attribute is not used for HABITAT or T_MAMMAL elements.

```
Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: Y
                         Enumerated Domain Value Definition: Life-history stage or activity present
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: N
                         Enumerated Domain Value Definition: Life-history stage or activity not present
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: -
                         Enumerated Domain Value Definition:
                                Breed category not used or not appropriate for record(s) in question
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: BREED5
            Attribute Definition:
                   Life history stage or activity type, where: if ELEMENT is "FISH" then BREED5 = adults; if ELEMENT is
                   "INVERT" then BREED5 = adults; if ELEMENT is "REPTILE" then BREED5 = adults. This attribute is not
                   used for BIRD, M_MAMMAL, HABITAT, or T_MAMMAL elements.
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: Y
                         Enumerated Domain Value Definition: Life-history stage or activity present
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: N
                         Enumerated Domain Value Definition: Life-history stage or activity not present
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: -
                         Enumerated Domain Value Definition:
                                Breed category not used or not appropriate for record(s) in question
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
Detailed Description:
      Entity Type:
            Entity Type Label: SOURCES
             Entity_Type Definition:
                   The data table SOURCES contains the primary sources used to create the ESI data set. See the Browse_Graphic
                   section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute
                   tables in the ESI data structure.
             Entity Type Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: SOURCE_ID
            Attribute Definition:
                   Source identifier that links records in the SOURCES data table to the items G SOURCE and A SOURCE in the
                   SOC DAT table, and to G SOURCE and S SOURCE in the BIORES table.
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Range Domain:
                         Range Domain Minimum: 1
                         Range Domain Maximum: N
      Attribute:
            Attribute Label: ORIGINATOR
            Attribute Definition: Author or developer of source material or data set
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: Any character
                         Enumerated Domain Value Definition: Free text
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
```

```
Attribute:
      Attribute Label: DATE_PUB
      Attribute Definition:
            Date of source material, publication, or date of personal communication with expert source
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: Numeric
                   Enumerated Domain Value Definition: mmyyyy
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: TITLE
      Attribute Definition: Title of source material or data
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: Any character
                   Enumerated Domain Value Definition: Free text
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: DATA FORMAT
      Attribute Definition: The format of the source material
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: Any character
                   Enumerated Domain Value Definition: Free text
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: PUBLICATION
      Attribute Definition: Additional citation information
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: Any character
                   Enumerated Domain Value Definition: Free text
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: SCALE
      Attribute Definition: Scale denominator of the source
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: integer
                   Enumerated Domain Value Definition: Any integer
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute_Label: TIME_PERIOD
      Attribute Definition:
            Date(s) of data collection that the source material is based upon.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: Numeric
                   Enumerated Domain Value Definition: yyyy
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
Entity Type:
```

Detailed Description:

Entity_Type_Label: STATUS

Entity_Type Definition:

The data table STATUS identifies the species that are listed as either threatened or endangered by a state or federal authority. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

Entity Type Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: ELEMENT

Attribute Definition: Major categories of biological data

```
Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: BIRD
                  Enumerated_Domain_Value_Definition: Birds
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: FISH
                  Enumerated Domain Value Definition: Fish
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: HABITAT
                  Enumerated Domain Value Definition: Habitats and Plants
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: INVERT
                  Enumerated Domain Value Definition: Invertebrates
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: M_MAMMAL
                  Enumerated Domain Value Definition: Marine Mammals
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: REPTILE
                  Enumerated Domain Value Definition: Reptiles and Amphibians
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: T_MAMMAL
                  Enumerated Domain Value Definition: Terrestrial Mammals
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: SPECIES_ID
      Attribute Definition:
            Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI
            species list maintained at NOAA
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Range Domain:
                  Range Domain Minimum: 1
                  Range Domain Maximum: N
Attribute:
      Attribute Label: STATE
      Attribute Definition: Two-letter state abbreviation
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: Any character
                  Enumerated Domain Value Definition: Two-letter state abbreviation
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: S_F
      Attribute Definition: State and Federal status.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: F
                  Enumerated Domain Value Definition: Federally listed
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: S
```

```
Enumerated Domain Value Definition: State listed
                               Enumerated Domain Value Definition Source: Research Planning, Inc.
                  Attribute Domain Values:
                         Enumerated Domain:
                               Enumerated Domain Value: S/F
                               Enumerated Domain Value Definition: State and federally listed
                               Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute:
                  Attribute Label: T_E
                  Attribute Definition: Threatened and endangered status.
                  Attribute Definition Source: Research Planning, Inc.
                  Attribute Domain Values:
                         Enumerated Domain:
                               Enumerated Domain Value: E
                               Enumerated Domain Value Definition: Endangered on state or federal list
                               Enumerated Domain Value Definition Source: U.S. Fish and Wildlife Service
                  Attribute Domain Values:
                         Enumerated Domain:
                               Enumerated Domain Value: T
                               Enumerated Domain Value Definition: Threatened on state or federal list
                               Enumerated Domain Value Definition Source: U.S. Fish and Wildlife Service
            Attribute:
                  Attribute_Label: DATE_PUB
                  Attribute Definition:
                         Publication date of source material used to assign state and federal status values for each species, if used.
                  Attribute Definition Source: Research Planning, Inc.
                  Attribute Domain Values:
                         Enumerated Domain:
                               Enumerated Domain Value: Numeric
                               Enumerated Domain Value Definition: mmyyyy
                               Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute:
                  Attribute Label: EL_SPE
                  Attribute Definition:
                         Concatenation of ELEMENT and SPECIES_ID. This item links the STATUS data table to the BIORES and
                         SPECIES data tables.
                  Attribute Definition Source: Research Planning, Inc.
                  Attribute Domain Values:
                         Enumerated Domain:
                               Enumerated Domain Value: E#####
                               Enumerated Domain Value Definition:
                                      Where E is the first character of ELEMENT and the next five characters are SPECIES ID (eg.
                                      ELEMENT = 'BIRD' and SPECIES_ID = 1; EL_SPE = 'B00001').
                               Enumerated Domain Value Definition Source: Research Planning, Inc.
Distribution Information:
      Distributor:
            Contact Information:
                   Contact Person Primary:
                         Contact Person: John Kaperick
                         Contact Organization: NOAA, Office of Response and Restoration
                   Contact Address:
                         Address Type: Physical Address
                         Address: 7600 Sand Point Way, N.E.
                         City: Seattle
                         State or Province: Washington
                         Postal Code: 98115-6349
                   Contact Voice Telephone: (206) 526-6400
                   Contact Facsimile Telephone: (206) 526-6329
```

Distribution Liability: Although these data have been processed successfully on a computer system at the National Oceanic and Atmospheric

Resource Description: ESI Atlas for the Aleutian Islands

Administration, no warranty, expressed or implied, is made by NOAA regarding the utility of the data on any other system, nor shall the act of distribution constitute any such warranty. NOAA warrants the delivery of this product in computer-readable format, and will offer a replacement copy of the product when the product is determined unreadable by

computer-input peripherals, or when the physical medium is delivered in damaged condition.

Custom Order Process:

Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to a wider community of GIS/mapping users. Distribution formats include ARC export, MOSS and Shape files, and MARPLOT map folders. An ArcView ESI project and ESI_Viewer product are also included on the distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

Metadata Reference Information: Metadata Date: 200205 Metadata Review Date: 200205 Metadata Contact: Contact Information: Contact Person Primary: Contact Person: Jill Petersen Contact Organization: NOAA, Office of Response and Restoration Contact Position: GIS Manager Contact Address: Address Type: Physical Address Address: 7600 Sand Point Way, N.E. City: Seattle State or Province: Washington Postal Code: 98115-6349 Contact Voice Telephone: (206) 526-6944 Contact Facsimile Telephone: (206) 526-6329 Contact Electronic Mail Address: Jill.Petersen@noaa.gov Metadata Standard Name: Content Standards for Digital Geospatial Metadata Metadata Standard Version: FGDC-STD-001-1998

Generated by mp version 2.7.23 on Thu May 16 15:17:23 2002

Aleutian Islands Coastal Resources Inventory and Environmental Sensitivity Maps: FISHL (Fish Lines)

Metadata also available as - [Parseable text] - [SGML]

Metadata:

- Identification Information
- Data Quality Information
- Spatial Data Organization Information
- Spatial Reference Information
- Entity and Attribute Information
- <u>Distribution Information</u>
- Metadata Reference Information

Identification Information:

Citation:

Citation Information:

Originator:

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Prince William Sound Oil Spill Recovery Institute; Aleutians West Coastal Resource Service Area (CRSA); Aleutians East Borough; Alaska Chadux Corporation; United States Coast Guard; and National Fish & Wildlife Foundation.

Publication Date: 200205

Title:

Aleutian Islands Coastal Resources Inventory and Environmental Sensitivity Maps: FISHL (Fish Lines)

Edition: First

Geospatial_Data_Presentation_Form: Digital vector data

Series Information:

Series Name: None

Issue Identification: Aleutian Islands

Publication Information:

Publication_Place: Seattle, Washington

Publisher:

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington

Other_Citation_Details:

Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Prince William Sound Oil Spill Recovery Institute; Aleutians West Coastal Resource Service Area (CRSA); Aleutians East Borough; Alaska Chadux Corporation; United States Coast Guard; and National Fish & Wildlife Foundation.

Description:

Abstract:

This data set contains biological resource data for anadromous fish streams in the Aleutian Islands, Alaska. Vector lines in this data set represent locations of fish streams. Species-specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for Aleutians East Borough and Aleutians West Coastal Resource Service Area (CRSA). These data characterize the marine and coastal environments and wildlife. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources. See also the FISH (Fish Polygons) data layer, part of the larger Aleutians East/Aleutians West ESI database, for additional fish information.

Purpose:

The ESI data were collected, mapped, and digitized to provide environmental data for oil spill planning and response. The Clean Water Act with amendments by the Oil Pollution Act of 1990 requires response plans for immediate and effective protection of sensitive resources.

Time_Period_of_Content:

Time Period Information:

Range of Dates/Times:

Beginning_Date: 2000 Ending Date: 2001

Currentness_Reference:

The biological data were compiled during 2000-2001. The currentness dates for these data range from 2000 to 2001 and are documented in the Source Information section.

Status:

Progress: Complete

Maintenance and Update Frequency: None Scheduled

Spatial Domain:

Bounding Coordinates:

West_Bounding_Coordinate: 172.42000 East_Bounding_Coordinate: -158.81002 North_Bounding_Coordinate: 58.133120 South Bounding_Coordinate: 48.351629

Keywords:

Theme:

Theme Keyword Thesaurus: None

Theme Keyword: ESI

Theme_Keyword: Sensitivity maps Theme_Keyword: Coastal resources Theme_Keyword: Oil spill planning

Theme_Keyword: Coastal Zone Management

Theme_Keyword: Wildlife Theme_Keyword: Fish

Place:

Place Keyword Thesaurus: None Place Keyword: Aleutian Islands

Access Constraints: None

Use Constraints:

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

Browse Graphic:

Browse_Graphic_File_Name: datafig.jpg Browse Graphic File Description:

Relationships between spatial data layers and attribute data tables for the Aleutian Islands ESI data.

Browse Graphic File Type: JPEG

Data_Set_Credit:

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Prince William Sound Oil Spill Recovery Institute; Aleutians West Coastal Resource Service Area (CRSA); Aleutians East Borough; Alaska Chadux Corporation; United States Coast Guard; and National Fish & Wildlife Foundation.

Native Data Set Environment:

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.0.2) and ORACLE(r) RDBMS (version 8.0.5.0.0). The hardware configuration is Hewlett Packard workstations (models 715/50 and 712/80i with 4 X-terminals) with UNIX operating system (HP-UX Release A.10.20), and PC's with Windows Operating System (NT4.0/2000). The Spatial_Data_Organization Information section refers only to the source files in the ARC export format. The following files are included in that data set: birds.e00, bio_lut.e00, biofile.e00, biores.e00, breed.e00, breed_edt.e00, esi.e00, faults.e00, fishl.e00, geo.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, m_mampt.e00, mgt.e00, nests.e00, seasonal.e00, soc_dat.e00, soc_lut.e00, socecon.e00, sources.e00, species.e00, status.e00, volcanos.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biofile, biores, breed_dt, seasonal, soc_dat, soc_lut, socecon, sources, species, and status.

Data_Quality_Information:

Attribute Accuracy:

Attribute Accuracy Report:

A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.

Logical Consistency Report:

A multi-stage error checking process, described in the above Attribute_Accuracy_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles,

unnecessary node, etc.), and ORACLE(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks. In the process of checking for topological and database consistencies, new ID's and RARNUM's or HUNUM's are also generated. The new ID's are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon, a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "resource at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

Completeness Report:

These data are obtained from digital data on anadromous fish streams. Refer to the FISH (Fish Polygons) data layer for additional anadromous fish information. These data do not necessarily represent all anadromous fish streams in the Aleutian Islands, Alaska. The following species are included in this data set (Species_ID, Common Name, Scientific Name, if applicable): 68, Chinook salmon, Oncorhynchus tshawytscha; 69, Coho salmon (silver), Oncorhynchus kisutch; 70, Pink salmon (humpy), Oncorhynchus gorbuscha; 71, Sockeye salmon (red), Oncorhynchus nerka; 72, Chum salmon (dog), Oncorhynchus keta; 74, Rainbow trout (steelhead), Oncorhynchus mykiss; 135, Dolly varden, Salvelinus malma.

Positional Accuracy:

Horizontal Positional Accuracy:

Horizontal Positional Accuracy Report:

This biological data set was developed from pre-existing digital sources and reflects the positional accuracy of these original data. See the Lineage and Process_Description sections for more information on the original data source and how these data were integrated or manipulated to create the final data set. Note that biological resource data by their very nature are considered "fuzzy", and this should be understood when considering the positional accuracy of vector digital objects representing these resources.

Lineage:

Source Information:

Source Citation:

Citation Information:

Originator: Ed Weiss Publication Date: 2000

Title: Waters Important to Anadromous Fish

Geospatial_Data_Presentation_Form: Hardcopy Map

Publication Information:

Publication_Place: Anchorage, Alaska

Publisher: Alaska Department of Fish and Game

Source Scale Denominator: 63360

Type of Source Media: Electronic mail service

Source Time Period of Content:

Time Period Information:

Single Date/Time:

Calendar_Date: 2000

Source Currentness Reference: Date of study

Source_Citation_Abbreviation: None Source_Contribution: Fish information

Process Step:

Process Description:

The data source used to depict fish line locations was the Alaska Department of Fish and Game's Waters Important to Anadromous Fish Database. The digital positional data were used exactly as provided, and the attribute data were converted to a format compatible with the ESI data format. Following the data compilation phase, several sets of completed maps were sent out to the resources agencies for review, and edits were made based on recommendations by the resource experts.

Process_Date: 200111
Process_Contact:

Contact Information:

Contact Organization Primary:

Contact Organization: NOAA, Office of Response and Restoration

Contact Person: Jill Petersen

Contact Address:

Address_Type: Physical address Address: 7600 Sand Point Way, N.E.

City: Seattle

State or Province: Washington

Postal Code: 98115-6349

Contact_Voice_Telephone: (206) 526-6944 Contact_Facsimile_Telephone: (206) 526-6329

Contact Electronic Mail Address: Jill.Petersen@noaa.gov

Spatial Data Organization Information:

Direct Spatial Reference Method: Vector

Point and Vector Object Information:

SDTS Terms Description:

SDTS Point and Vector Object Type: Complete chain

Point and Vector Object Count: 1064

SDTS Terms Description:

SDTS_Point_and_Vector_Object_Type: Link Point and Vector Object Count: 71655

SDTS Terms Description:

SDTS_Point_and_Vector_Object_Type: Node, planar graph

Point and Vector Object Count: 1811

Spatial_Reference Information:

Horizontal Coordinate System Definition:

Geographic:

Latitude_Resolution: 0.00005 Longitude Resolution: 0.00005

Geographic Coordinate Units: Decimal degrees

Geodetic Model:

Horizontal Datum Name: North American Datum of 1927

Ellipsoid_Name: Claek 1866 Semi-major Axis: 6378206.4

Denominator of Flattening Ratio: 294.978698

Entity and Attribute Information:

Overview_Description:

Entity and Attribute Overview:

In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, FISHL) is linked to the Biological Resources table (BIORES) using the unique ID and the lookup table BIO_LUT, or it can be linked directly using RARNUM. The ID is a unique combination of the atlas number (for the Aleutian Islands, the number is 72), an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described below in detail. See the Browse Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure. Due to the complexity of the relational database model, the data items are also post-processed into a flat file format. This table, called BIOFILE, may be used in place of the relational files described below to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN SPEC, S F, T E, NHP, DATE PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G_SOURCE, S_SOURCE, and BREED. All of these items are the same as their counterparts in the individual data tables described below, except the BREED1-BREED5 and BREED items. BREED is a newly generated variable used to link to the BREED_DT data table, a modified, more compact version of the relational BREED data table. BREED1-BREED5 give a text summary of when each life stage occurs within the associated map object. The life stages referred to are the same as those listed in the Detailed_Description of the BREED data table. The link to the BIOFILE may be made through the BIO_LUT, using ID to link to RARNUM, or BIOFILE may be linked directly to the RARNUM in each of the geographic layer's attribute data tables. As mentioned, BREED_DT is an auxiliary support data table to the flat file structure, which allows the user to do searches based on month for seasonal breeding activities. The link from the flat file to BREED_DT is the BREED item. A second supporting data table is SOURCES. This is the same as the source file described above, and the link from the flat file is both G_SOURCE and S_SOURCE. It should be noted that although the flat file eases data query, it is not a normalized database structure, and actual updates performed by the states and other responsible agencies should be done using the relational data tables. The entity-relationship diagram describing relationships between attribute tables in the ESI data structure does NOT include the BIOFILE data table, and this data table is NOT described in detail below.

Detailed Description:

Entity_Type:

Entity_Type_Label: FISHL.AAT

Entity_Type_Definition:

The FISHL.AAT table contains attribute information for the vector arcs representing anadromous fish streams. Note that all attribute information is stored in a series of relational files, described below. See the

Browse_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure

Entity Type Definition Source: Research Planning, Inc.

Attribute:

Attribute_Label: ID Attribute Definition:

An identifier that links vector objects in the biology data layers to records in the BIO_LUT data table. ID is a concatenation of atlas number (72), element number (22; 20 because it is a line feature, plus 2, the element value for FISH), and record number.

Attribute Definition Source: NOAA

Attribute Domain Values:

Range Domain:

Range_Domain_Minimum: 722200001 Range_Domain_Maximum: 722201064

Attribute:

Attribute Label: RARNUM

Attribute Definition:

An identifier that links directly to the BIORES table or the flat format BIOFILE table.

Attribute Definition Source: NOAA

Attribute_Domain_Values:

Range Domain:

Range_Domain_Minimum: 72006447 Range Domain Maximum: 72000567

Detailed Description:

Entity Type:

Entity Type Label: BIO_LUT

Entity Type Definition:

The data table BIO_LUT is a lookup table that contains items necessary for linking vector objects in the biological data layers with the BIORES data table. Note that all attribute information is stored in a series of relational files, described below. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

Entity_Type_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: RARNUM

Attribute_Definition:

An identifier that links records in the BIO_LUT data table to records in the BIORES data table or the flat format BIOFILE data table. RARNUM values of 0 are holes in the polygons and do not contain information.

 $Attribute_Definition_Source \colon NOAA$

Attribute Domain Values:

Range_Domain:

Range_Domain_Minimum: 72000001 Range Domain Maximum: 72000615

Attribute:

Attribute Label: ID

Attribute_Definition:

An identifier that links vector objects in the biology data layers to records in the BIO_LUT data table. ID is a concatenation of atlas number (72), element number (22; 20 because it is a line feature, plus 2, the element value for FISH), and record number. ID values of 9999 are holes in polygons and do not contain information.

Attribute Definition Source: NOAA

Attribute_Domain_Values:

Range Domain:

Range_Domain_Minimum: 720100002 Range_Domain_Maximum: 723400623

$Detailed_Description:$

Entity_Type:

Entity Type Label: BIORES

Entity_Type_Definition:

The data table BIORES contains both biological attribute data and items necessary for linking vector objects in the biological data layers via the BIO_LUT data table to other associated data tables. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

Entity Type Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: RARNUM

Attribute_Definition:

An identifier that links records in the BIORES data table to records in the BIO_LUT data table or the flat format BIOFILE data table.

Attribute Definition Source: NOAA

```
Attribute Domain Values:
            Range Domain:
                   Range Domain Minimum: 072000001
                   Range Domain Maximum: 072000615
Attribute:
      Attribute Label: SPECIES_ID
      Attribute Definition:
            Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI
            species list maintained at NOAA.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Range Domain:
                   Range Domain Minimum: 1
                   Range Domain Maximum: N
Attribute:
      Attribute Label: CONC
      Attribute Definition:
            The field CONC refers to "concentration," abundance, or density values. In this data layer, the CONC field is
            blank because no concentration information was available for the anadromous fish streams.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: Any character
                   Enumerated Domain Value Definition: Free text
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: SEASON_ID
      Attribute Definition:
            Numeric identifier for the unique monthly presence and life history characteristics of each species at a given
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Range Domain:
                   Range Domain Minimum: 1
                   Range Domain Maximum: N
Attribute:
      Attribute Label: G_SOURCE
      Attribute Definition:
            Geographic source identifier that links records in the BIORES data table to records in the SOURCES data table.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Range Domain:
                   Range Domain Minimum: 1
                   Range Domain Maximum: N
Attribute:
      Attribute Label: S_SOURCE
      Attribute Definition:
            Seasonality source identifier that links records in the BIORES data table to records in the SOURCES data table.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Range Domain:
                   Range Domain Minimum: 1
                   Range Domain Maximum: N
Attribute:
      Attribute Label: ELEMENT
      Attribute Definition: Major categories of biological data
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: BIRD
                   Enumerated Domain Value Definition: Birds
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: FISH
                   Enumerated Domain Value Definition: Fish
```

Enumerated Domain Value Definition Source: Research Planning, Inc.

```
Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: HABITAT
                  Enumerated Domain Value Definition: Habitats and plants
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: INVERT
                  Enumerated Domain Value Definition: Invertebrates
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: M_MAMMAL
                  Enumerated Domain Value Definition: Marine mammals
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: REPTILE
                  Enumerated Domain Value Definition: Reptiles and Amphibians
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain_Value: T_MAMMAL
                  Enumerated Domain Value Definition: Terrestrial mammals
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: EL_SPE
      Attribute Definition:
            Concatenation of ELEMENT and SPECIES ID. This item links records in the BIORES data table to records in
            the SPECIES and STATUS data tables.
      Attribute_Definition_Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: E#####
                  Enumerated Domain Value Definition:
                        Where E is the first character of ELEMENT and the next five characters are SPECIES_ID (eg.
                        ELEMENT = 'BIRD' and SPECIES_ID = 1; EL_SPE = 'B00001').
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Label: EL_SPE_SEA
      Attribute Definition:
            Concatenation of ELEMENT, SPECIES ID, and SEASON ID, This item links records in the BIORES data
            table to records in the SEASONAL and BREED data tables.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: E######
                  Enumerated Domain Value Definition:
                        Where E is the first character of ELEMENT, the next five characters are SPECIES ID, and the
```

Attribute:

last two characters are SEASON_ID (eg. ELEMENT = 'BIRD', SPECIES_ID = 1 and $SEASON_ID = 1$; $EL_SPE_SEA = 'B0000101'$).

Enumerated Domain Value Definition Source: Research Planning, Inc.

Detailed Description:

Entity Type:

Entity_Type_Label: SPECIES

Entity Type Definition:

The data table SPECIES identifies all species in the ESI data set. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure. Refer to the Completeness_Report for a list of layer-specific species.

Entity Type Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: SPECIES_ID

Attribute Definition:

Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA.

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

```
Range Domain:
                  Range Domain Minimum: 1
                  Range Domain Maximum: N
Attribute:
      Attribute Label: NAME
      Attribute Definition: Species common name
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: Species common name for the entire ESI data set
                  Enumerated Domain Value Definition: Free text
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: GEN_SPEC
      Attribute Definition: Species scientific name
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: Species scientific name for the entire ESI data set
                  Enumerated Domain Value Definition: Free text
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: ELEMENT
      Attribute Definition: Major categories of biological data
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: BIRD
                  Enumerated Domain Value Definition: Birds
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: FISH
                  Enumerated Domain Value Definition: Fish
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: HABITAT
                  Enumerated Domain Value Definition: Habitats and plants
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: INVERT
                  Enumerated Domain Value Definition: Invertebrates
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute_Domain_Values:
            Enumerated Domain:
                  Enumerated Domain Value: M_MAMMAL
                  Enumerated Domain Value Definition: Marine Mammals
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: REPTILE
                  Enumerated Domain Value Definition: Reptiles and Amphibians
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: T_MAMMAL
                  Enumerated Domain Value Definition: Terrestrial Mammals
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
```

Attribute Label: SUBELEMENT

Attribute Definition: Element subgroup delineating a logical grouping of species.

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: alcid

```
Enumerated Domain Value Definition: Alcid
            Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
            Enumerated Domain Value: bivalve
            Enumerated Domain Value Definition: Bivalve
            Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
            Enumerated Domain Value: crab
            Enumerated Domain Value Definition: Crab
            Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
            Enumerated Domain Value: diadromous
            Enumerated Domain Value Definition: Diadromous fish
            Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
            Enumerated Domain Value: diving
            Enumerated Domain Value Definition: Diving bird
            Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
            Enumerated Domain Value: e_nursery
            Enumerated Domain Value Definition: Estuarine nursery fish
            Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
            Enumerated Domain Value: gull_tern
            Enumerated Domain Value Definition: Gull or tern
            Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
            Enumerated Domain Value: m_benthic
            Enumerated Domain Value Definition: Marine benthic fish
            Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
            Enumerated Domain Value: m_pelagic
            Enumerated Domain Value Definition: Marine pelagic fish
            Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
            Enumerated Domain Value: pelagic
            Enumerated Domain Value Definition: Pelagic bird
            Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
            Enumerated Domain Value: pinniped
            Enumerated Domain Value Definition: Pinniped
            Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
            Enumerated Domain Value: sav
            Enumerated Domain Value Definition: Submersed aquatic vegetation
            Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
            Enumerated Domain Value: shorebird
            Enumerated Domain Value Definition: Shorebird
```

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated Domain:

Enumerated_Domain_Value: sea_otter

Enumerated Domain Value Definition: Otter

Enumerated Domain Value Definition Source: Research Planning, Inc.

```
Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: waterfowl
                         Enumerated Domain Value Definition: Waterfowl
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: NHP
            Attribute Definition: Natural Heritage Program global ranking
            Attribute Definition Source: Network of Natural Heritage Program
            Attribute Domain Values:
                   Codeset Domain:
                         Codeset Name: NHP Global Conservation Status Rank
                         Codeset Source: Natural Heritage Program
      Attribute:
            Attribute Label: DATE PUB
            Attribute Definition: Date of NHP listing
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: 0
                         Enumerated Domain Value Definition: Not ranked
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: Numeric
                         Enumerated Domain Value Definition: mmyyyy
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: EL_SPE
            Attribute Definition:
                   Concatenation of ELEMENT and SPECIES_ID. This item links records in the SPECIES data table to records in
                   the BIORES and STATUS data tables.
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: E#####
                         Enumerated Domain Value Definition:
                               Where E is the first character of ELEMENT and the next five characters are SPECIES_ID (eg.
                               ELEMENT = 'BIRD' and SPECIES ID = 1; EL SPE = 'B00001').
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
Detailed Description:
      Entity Type:
            Entity Type Label: SEASONAL
            Entity Type Definition:
                   The data table SEASONAL contains information on the seasonal presence of each species associated with each
                   spatial vector object. See the Browse_Graphic section for a link to the entity-relationship diagram, which
                   describes the way this table relates to other attribute tables in the ESI data structure.
            Entity Type Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: ELEMENT
            Attribute Definition: Major categories of biological data
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: BIRD
                         Enumerated_Domain_Value Definition: Birds
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: FISH
                         Enumerated Domain Value Definition: Fish
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: HABITAT
                         Enumerated Domain Value Definition: Habitats and plants
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
```

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Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: INVERT
                   Enumerated Domain Value Definition: Invertebrates
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: M_MAMMAL
                   Enumerated Domain Value Definition: Marine Mammals
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerate \bar{d} Domain:
                   Enumerated Domain Value: REPTILE
                  Enumerated Domain Value Definition: Reptiles and Amphibians
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: T_MAMMAL
                   Enumerated Domain Value Definition: Terrestrial Mammals
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute_Label: SPECIES_ID
      Attribute Definition:
            Numeric identifier for each species that is unique within each element and refers to a nationwide ESI species list
            maintained at NOAA.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Range Domain:
                  Range Domain Minimum: 1
                  Range Domain Maximum: N
Attribute:
      Attribute Label: SEASON_ID
      Attribute Definition:
            Numeric identifier for the unique monthly presence and life history characteristics of each species at a given
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Range Domain:
                  Range Domain Minimum: 1
                  Range Domain Maximum: N
Attribute:
      Attribute Label: JAN
      Attribute Definition: January
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in January
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: FEB
      Attribute Definition: February
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in February
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: MAR
      Attribute Definition: March
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in March
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
```

```
Attribute:
      Attribute Label: APR
      Attribute Definition: April
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in April
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: MAY
      Attribute Definition: May
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: X
                   Enumerated_Domain_Value_Definition: Present in May
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: JUN
      Attribute Definition: June
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in June
                  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
      Attribute Label: JUL
      Attribute Definition: July
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in July
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: AUG
      Attribute Definition: August
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in August
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: SEP
      Attribute Definition: September
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in September
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: OCT
      Attribute Definition: October
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in October
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: NOV
      Attribute Definition: November
      Attribute Definition Source: Research Planning, Inc.
```

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Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: X
                         Enumerated Domain Value Definition: Present in November
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: DEC
            Attribute Definition: December
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: X
                         Enumerated Domain Value Definition: Present in December
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
             Attribute Label: EL_SPE_SEA
            Attribute Definition:
                   Concatenation of ELEMENT, SPECIES_ID, and SEASON_ID. This item links records in the SEASONAL data
                   table to records in the BIORES and BREED data tables.
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: E######
                         Enumerated Domain Value Definition:
                                Where E is the first character of ELEMENT, the next five characters are SPECIES ID, and the
                               last two characters are SEASON ID (eg. ELEMENT = 'BIRD', SPECIES ID = 1 and
                               SEASON_ID = 1; EL_SPE_SEA = 'B0000101').
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
Detailed Description:
      Entity Type:
             Entity Type Label: BREED
             Entity Type Definition:
                   The data table BREED identifies the monthly presence of certain life-history stages or activities for each species
                   at a given location.
             Entity Type Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: EL_SPE_SEA
            Attribute Definition:
                   Concatenation of ELEMENT, SPECIES_ID, and SEASON_ID. This item links records in the BREED data
                   table to records in the BIORES and SEASONAL data tables.
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: E######
                         Enumerated Domain Value Definition:
                               Where E is the first character of ELEMENT, the next five characters are SPECIES_ID, and the
                               last two characters are SEASON_ID (eg. ELEMENT = 'BIRD', SPECIES_ID = 1 and
                               SEASON_ID = 1; EL_SPE_SEA = 'B0000101').
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
             Attribute Label: MONTH
            Attribute Definition:
                   Two-digit calendar month. Each life history stage or activity type for a particular species can have up to 12
                   records to account for each month of the year.
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Range Domain:
                         Range Domain Minimum: 1
                         Range Domain Maximum: 12
      Attribute:
             Attribute Label: BREED1
            Attribute Definition:
                   Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED1 = nesting; if ELEMENT is
```

"FISH" then BREED1 = spawning; if ELEMENT is "INVERT" then BREED1 = spawning/mating; if

This attribute is not used for HABITAT or T_MAMMAL elements.

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

ELEMENT is "REPTILE" then BREED1 = nesting; if ELEMENT is "M MAMMAL" then BREED1 = mating.

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```
Enumerated Domain:
```

Enumerated Domain Value: Y

Enumerated Domain Value Definition: Life-history stage or activity present

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: N

Enumerated_Domain_Value_Definition: Life-history stage or activity not present

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: -

Enumerated Domain Value Definition:

Breed category not used or not appropriate for record(s) in question

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute_Label: BREED2

Attribute Definition:

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED2 = laying; if ELEMENT is "FISH" then BREED2 = eggs; if ELEMENT is "INVERT" then BREED2 = eggs; if ELEMENT is "REPTILE" then BREED2 = hatching; if ELEMENT is "M_MAMMAL" then BREED2 = calving. This attribute is not used for HABITAT or T_MAMMAL elements.

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: Y

Enumerated Domain Value Definition: Life-history stage or activity present

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: N

Enumerated_Domain_Value_Definition: Life-history stage or activity not present

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: -

Enumerated Domain Value Definition:

Breed category not used or not appropriate for record(s) in question

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute Label: BREED3

Attribute Definition:

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED3 = hatching; if ELEMENT is "FISH" then BREED3 = larvae; if ELEMENT is "INVERT" then BREED3 = larvae; if ELEMENT is

"REPTILE" then BREED3 = internesting; if ELEMENT is "M_MAMMAL" then BREED3 = pupping. This attribute is not used for HABITAT or T_MAMMAL elements.

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: Y

Enumerated_Domain_Value_Definition: Life-history stage or activity present

Enumerated Domain Value Definition Source: Research Planning, Inc.

$Attribute_Domain_Values:$

Enumerated Domain:

Enumerated_Domain_Value: N

Enumerated_Domain_Value_Definition: Life-history stage or activity not present

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: -

Enumerated Domain Value Definition:

Breed category not used or not appropriate for record(s) in question

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: BREED4

Attribute Definition:

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED4 = fledging; if ELEMENT is

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Aleutian Islands Coastal Resources Inventory and
                                                                                                   Environmental Sensitivity Maps: FISHL (Fish Lines)
                   "FISH" then BREED4 = juvenile; if ELEMENT is "INVERT" then BREED4 = juvenile; if ELEMENT is
                   "REPTILE" then BREED4 = juvenile; if ELEMENT is "M MAMMAL" then BREED4 = molting. This
                   attribute is not used for HABITAT or T_MAMMAL elements.
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: Y
                         Enumerated Domain Value Definition: Life-history stage or activity present
                          Enumerated Domain Value Definition Source: Research Planning, Inc.
             Attribute Domain Values:
                   Enumerated Domain:
                          Enumerated Domain Value: N
                          Enumerated Domain Value Definition: Life-history stage or activity not present
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: -
                         Enumerated Domain Value Definition:
                                Breed category not used or not appropriate for record(s) in question
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
             Attribute_Label: BREED5
            Attribute Definition:
                   Life history stage or activity type, where: if ELEMENT is "FISH" then BREED5 = adults; if ELEMENT is
                   "INVERT" then BREED5 = adults; if ELEMENT is "REPTILE" then BREED5 = adults. This attribute is not
                   used for BIRD, M_MAMMAL, HABITAT, or T_MAMMAL elements.
             Attribute Definition Source: Research Planning, Inc.
             Attribute Domain Values:
                   Enumerated Domain:
                          Enumerated Domain Value: Y
                          Enumerated Domain Value Definition: Life-history stage or activity present
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: N
                          Enumerated Domain Value Definition: Life-history stage or activity not present
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: -
                          Enumerated Domain Value Definition:
                                Breed category not used or not appropriate for record(s) in question
                          Enumerated Domain Value Definition Source: Research Planning, Inc.
Detailed Description:
      Entity_Type:
             Entity_Type_Label: SOURCES
             Entity Type Definition:
                   The data table SOURCES contains the primary sources used to create the ESI data set. See the Browse Graphic
                   section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute
                   tables in the ESI data structure.
             Entity Type Definition Source: Research Planning, Inc.
      Attribute:
             Attribute Label: SOURCE_ID
            Attribute Definition:
                   Source identifier that links records in the SOURCES data table to the items G_SOURCE and A_SOURCE in the
                   SOC_DAT table, and to G_SOURCE and S_SOURCE in the BIORES table.
            Attribute Definition Source: Research Planning, Inc.
             Attribute Domain Values:
                   Range Domain:
                         Range Domain Minimum: 1
                         Range Domain Maximum: N
      Attribute:
             Attribute Label: ORIGINATOR
```

Attribute Definition: Author or developer of source material or data set

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

```
Enumerated Domain Value: Any character
                         Enumerated Domain Value Definition: Free text
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: DATE_PUB
            Attribute Definition:
                   Date of source material, publication, or date of personal communication with expert source
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: Numeric
                         Enumerated Domain Value Definition: mmyyyy
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: TITLE
            Attribute Definition: Title of source material or data
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: Any character
                         Enumerated Domain Value Definition: Free text
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
             Attribute Label: DATA_FORMAT
            Attribute Definition: The format of the source material
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: Any character
                         Enumerated Domain Value Definition: Free text
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: PUBLICATION
            Attribute Definition: Additional citation information
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: Any character
                         Enumerated Domain Value Definition: Free text
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: SCALE
            Attribute Definition: Scale denominator of the source
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: integer
                         Enumerated Domain Value Definition: Any integer
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: TIME_PERIOD
            Attribute Definition:
                   Date(s) of data collection that the source material is based upon.
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: Numeric
                         Enumerated Domain Value Definition: yyyy
                         Enumerated_Domain_Value Definition Source: Research Planning, Inc.
Detailed Description:
      Entity Type:
             Entity Type Label: STATUS
             Entity Type Definition:
                   The data table STATUS identifies the species that are listed as either threatened or endangered by a state or
                   federal authority. See the Browse Graphic section for a link to the entity-relationship diagram, which describes
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the way this table relates to other attribute tables in the ESI data structure.

Entity Type Definition Source: Research Planning, Inc.

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Attribute:

Attribute Label: ELEMENT

Attribute_Definition: Major categories of biological data

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated Domain Value: BIRD

Enumerated_Domain_Value_Definition: Birds

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated_Domain Value: FISH

Enumerated_Domain_Value_Definition: Fish

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated Domain:

Enumerated Domain Value: HABITAT

Enumerated Domain Value Definition: Habitats and Plants

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: INVERT

Enumerated Domain Value Definition: Invertebrates

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: M_MAMMAL

Enumerated Domain Value Definition: Marine Mammals

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: REPTILE

Enumerated_Domain_Value_Definition: Reptiles and Amphibians

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: T_MAMMAL

Enumerated Domain Value Definition: Terrestrial Mammals

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: SPECIES_ID

Attribute_Definition:

Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA

Attribute_Definition_Source: Research Planning, Inc.

Attribute Domain Values:

Range Domain:

Range_Domain_Minimum: 1

Range Domain Maximum: N

Attribute:

Attribute Label: STATE

Attribute Definition: Two-letter state abbreviation Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: Any character

Enumerated Domain Value Definition: Two-letter state abbreviation

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: S_F

Attribute Definition: State and Federal status.

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: F

Enumerated Domain Value Definition: Federally listed

Enumerated Domain Value Definition Source: Research Planning, Inc.

```
Attribute Domain Values:
                         Enumerated Domain:
                               Enumerated Domain Value: S
                               Enumerated Domain Value Definition: State listed
                               Enumerated Domain Value Definition Source: Research Planning, Inc.
                  Attribute Domain Values:
                         Enumerated Domain:
                               Enumerated Domain_Value: S/F
                               Enumerated Domain Value Definition: State and federally listed
                               Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute:
                  Attribute Label: T_E
                  Attribute Definition: Threatened and endangered status.
                  Attribute Definition Source: Research Planning, Inc.
                  Attribute Domain Values:
                         Enumerated Domain:
                               Enumerated Domain Value: E
                               Enumerated Domain Value Definition: Endangered on state or federal list
                               Enumerated Domain Value Definition Source: U.S. Fish and Wildlife Service
                  Attribute Domain Values:
                         Enumerated Domain:
                               Enumerated Domain Value: T
                               Enumerated Domain Value_Definition: Threatened on state or federal list
                               Enumerated Domain Value Definition Source: U.S. Fish and Wildlife Service
            Attribute:
                  Attribute Label: DATE_PUB
                  Attribute ^{-} Definition: \\
                         Publication date of source material used to assign state and federal status values for each species, if used.
                  Attribute Definition Source: Research Planning, Inc.
                  Attribute Domain Values:
                         Enumerated Domain:
                               Enumerated Domain Value: Numeric
                               Enumerated Domain Value Definition: mmyyyy
                               Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute:
                  Attribute Label: EL_SPE
                  Attribute Definition:
                         Concatenation of ELEMENT and SPECIES ID. This item links the STATUS data table to the BIORES and
                         SPECIES data tables.
                  Attribute Definition Source: Research Planning, Inc.
                  Attribute Domain Values:
                         Enumerated Domain:
                               Enumerated Domain Value: E#####
                               Enumerated Domain Value Definition:
                                      Where E is the first character of ELEMENT and the next five characters are SPECIES ID (eg.
                                      ELEMENT = 'BIRD' and SPECIES ID = 1; EL SPE = 'B00001').
                               Enumerated Domain Value Definition Source: Research Planning, Inc.
Distribution Information:
      Distributor:
            Contact Information:
                   Contact Person Primary:
                         Contact Person: John Kaperick
                         Contact Organization: NOAA, Office of Response and Restoration
                   Contact Address:
                         Address Type: Physical Address
                         Address: 7600 Sand Point Way, N.E.
                         City: Seattle
                         State or Province: Washington
                         Postal Code: 98115-6349
                  Contact Voice Telephone: (206) 526-6400
```

Although these data have been processed successfully on a computer system at the National Oceanic and Atmospheric

Contact Facsimile Telephone: (206) 526-6329

Resource Description: ESI Atlas for the Aleutian Islands

Distribution Liability:

Administration, no warranty, expressed or implied, is made by NOAA regarding the utility of the data on any other system, nor shall the act of distribution constitute any such warranty. NOAA warrants the delivery of this product in computer-readable format, and will offer a replacement copy of the product when the product is determined unreadable by computer-input peripherals, or when the physical medium is delivered in damaged condition.

Custom Order Process:

Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to a wider community of GIS/mapping users. Distribution formats include ARC export, MOSS and Shape files, and MARPLOT map folders. An ArcView ESI project and ESI_Viewer product are also included on the distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

Metadata Reference Information: Metadata Date: 200205 Metadata Review Date: 200205 Metadata Contact: Contact Information: Contact Person Primary: Contact Person: Jill Petersen Contact Organization: NOAA, Office of Response and Restoration Contact Position: GIS Manager Contact Address: Address Type: Physical Address Address: 7600 Sand Point Way, N.E. City: Seattle State or Province: Washington Postal Code: 98115-6349 Contact Voice Telephone: (206) 526-6944 Contact Facsimile Telephone: (206) 526-6329 Contact Electronic Mail Address: Jill.Petersen@noaa.gov Metadata Standard Name: Content Standards for Digital Geospatial Metadata Metadata Standard Version: FGDC-STD-001-1998

Generated by mp version 2.7.23 on Thu May 16 15:31:44 2002

Aleutian Islands Coastal Resources Inventory and Environmental Sensitivity Maps: INVERT (Invertebrate Polygons)

Metadata also available as - [Parseable text] - [SGML]

Metadata:

- Identification Information
- Data Quality Information
- Spatial Data Organization Information
- Spatial Reference Information
- Entity and Attribute Information
- <u>Distribution Information</u>
- Metadata Reference Information

Identification Information:

Citation:

Citation Information:

Originator:

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Prince William Sound Oil Spill Recovery Institute; Aleutians West Coastal Resource Service Area (CRSA); Aleutians East Borough; Alaska Chadux Corporation; United States Coast Guard; and National Fish & Wildlife Foundation.

Publication Date: 200205

Title:

Aleutian Islands Coastal Resources Inventory and Environmental Sensitivity Maps: INVERT (Invertebrate Polygons)

Edition: First

Geospatial Data Presentation Form: Digital vector data

Series Information:

Series Name: None

Issue Identification: Aleutian Islands

Publication Information:

Publication Place: Seattle, Washington

Publisher:

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington

Other Citation Details:

Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Prince William Sound Oil Spill Recovery Institute; Aleutians West Coastal Resource Service Area (CRSA); Aleutians East Borough; Alaska Chadux Corporation; United States Coast Guard; and National Fish & Wildlife Foundation.

Description:

Abstract

This data set contains biological resource data for crabs and bivalves in the Aleutian Islands, Alaska. Vector polygons in this data set represent locations of invertebrate concentration areas. Species-specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for Aleutians East Borough and Aleutians West Coastal Resource Service Area (CRSA). These data identify the marine and coastal environments and wildlife. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources.

Purpose.

The ESI data were collected, mapped, and digitized to provide environmental data for oil spill planning and response. The Clean Water Act with amendments by the Oil Pollution Act of 1990 requires response plans for immediate and effective protection of sensitive resources.

Time_Period_of_Content:

Time Period Information:

Range of Dates/Times:

Beginning_Date: 2000 Ending Date: 2001

Currentness Reference:

The biological data were compiled during 2000-2001. The currentness dates for these data range from 1982 to 2001 and are documented in the Source_Information section.

Status:

Progress: Complete

Maintenance and Update Frequency: None Scheduled

Spatial Domain:

Bounding Coordinates:

West_Bounding_Coordinate: 172.42000 East_Bounding_Coordinate: -158.81002 North_Bounding_Coordinate: 58.133120 South Bounding_Coordinate: 48.351629

Keywords:

Theme:

Theme Keyword Thesaurus: None

Theme Keyword: ESI

Theme_Keyword: Sensitivity maps Theme_Keyword: Coastal resources Theme_Keyword: Oil spill planning

Theme_Keyword: Coastal Zone Management

Theme_Keyword: Wildlife Theme_Keyword: Invertebrate

Place:

Place_Keyword_Thesaurus: None Place Keyword: Aleutian Islands

Access Constraints: None

Use Constraints:

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

Browse Graphic:

Browse_Graphic_File_Name: datafig.jpg Browse Graphic File Description:

Relationships between spatial data layers and attribute data tables for the Aleutian Islands ESI data.

Browse Graphic File Type: JPEG

Data Set Credit:

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Prince William Sound Oil Spill Recovery Institute; Aleutians West Coastal Resource Service Area (CRSA); Aleutians East Borough; Alaska Chadux Corporation; United States Coast Guard; and National Fish & Wildlife Foundation.

Native Data Set Environment:

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.0.2) and ORACLE(r) RDBMS (version 8.0.5.0.0). The hardware configuration is Hewlett Packard workstations (models 715/50 and 712/80i) with UNIX operating system (HP-UX Release A.10.20), and PC's with Windows Operating System (NT4.0/2000). The Spatial_Data_Organization Information section refers only to the source files in the ARC export format. The following files are included in that data set: birds.e00, bio_lut.e00, biofile.e00, biores.e00, breed_e00, breed_dt.e00, esi.e00, faults.e00, fish.e00, fishl.e00, geo.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, m_mampt.e00, mgt.e00, nests.e00, seasonal.e00, soc_dat.e00, soc_lut.e00, socecon.e00, sources.e00, species.e00, status.e00, volcanos.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biofile, biores, breed_dt, seasonal, soc_dat, soc_lut, socecon, sources, species, and status.

Data_Quality_Information:

Attribute Accuracy:

Attribute Accuracy Report:

A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.

Logical Consistency Report:

A multi-stage error checking process, described in the above Attribute_Accuracy_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles,

unnecessary node, etc.), and ORACLE(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks. In the process of checking for topological and database consistencies, new ID's and RARNUM's or HUNUM's are also generated. The new ID's are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon, a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "resource at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

Completeness Report:

These data represent a synthesis of expert knowledge and available hardcopy reports and digital data on invertebrate concentration areas. These data do not necessarily represent all invertebrate occurrences in the Aleutian Islands, Alaska. The following species are included in this data set (Species_ID, Common Name, Scientific Name, if applicable): 19, Blue mussel, Mytilus edulis; 21, Washington butter clam, Saxidomus giganteus; 28, Pacific razor clam, Siliqua patula; 39, Red king crab, Paralithodes camtschaticus; 40, Tanner crab, Chionoecetes bairdi; 259, Weathervane scallop, Patinopectin caurinus; 432, Macoma spp., Macoma spp.

Positional Accuracy:

Horizontal Positional Accuracy:

Horizontal Positional Accuracy Report:

Some of the spatial components of the biological data sets are developed using regional experts who estimate concentration areas. It is difficult to estimate the positional accuracy of such data, except to state that they are compiled on hardcopy basemaps with a scale of 1:250,000. The rest of the spatial components of the biological data sets are developed from pre-existing digital sources and reflect the positional accuracy of these original data. See the Lineage and Process_Description sections for more information on the original data source and how these data were integrated or manipulated to create the final data set. Note that biological resource data by their very nature are considered "fuzzy", and this should be understood when considering the positional accuracy of vector digital objects representing these resources.

Lineage:

```
Source Information:
```

Source Citation:

Citation Information:

Originator: Mark Fink, Alaska Department of Fish and Game

Publication_Date: Unpublished material Title: Most Environmentally Sensitive Areas

Geospatial_Data_Presentation_Form: Hardcopy Map

Source_Scale_Denominator: 250000 Type of Source Media: Paper

Source Time Period of Content:

Time_Period_Information:

Single_Date/Time:

Calendar Date: 2000

Source_Currentness_Reference: Date of study

Source Citation Abbreviation: None

Source Contribution: Invertebrate Information

Source Information:

Source Citation:

Citation_Information:

Originator: Alaska Department of Fish and Game

Publication Date: 1984

Title: Habitat Management Guides

Geospatial Data Presentation Form: Hardcopy Map

Publication Information:

Publication Place: Anchorage, Alaska

Publisher: Alaska Department of Fish and Game

Source Scale Denominator: 250000

Type of Source Media: Paper

Source_Time_Period_of_Content:

 \overline{T} ime \overline{P} eriod \overline{I} nformation:

Single_Date/Time:

Calendar Date: 1982

Source_Currentness_Reference: Date of study

Source Citation Abbreviation: None

Source Contribution: Invertebrate Information

Source_Information:

Source Citation:

Citation_Information:

Originator: Aleutians West CRSA

Publication_Date: Unpublished material Title: Coastal Zone Management Plan

Geospatial Data Presentation Form: Hardcopy Map

Source_Scale_Denominator: 500000
Type_of_Source_Media: Paper
Source_Time_Period_of_Content:
 Time_Period_Information:
 Single_Date/Time:

Calendar_Date: 1985

Source Currentness Reference: Date of study

Source Citation Abbreviation: None

Source Contribution: Invertebrate Information

Process Step:

Process Description:

Sources of data used to depict invertebrate distribution for this data layer came from personal interviews with resource experts from the National Marine Fisheries Service (NMFS) in Anchorage, and with locals having expert knowledge; Alaska Dept. of Fish and Game's Most Environmentally Sensitive Areas maps and Habitat Management Guides; and Aleutians East and West Coastal Resource Service Area (CRSA) management plan. Information gathered from the interviews and maps were compiled onto 1:250,000 scale USGS topographic maps. Digital data were transposed by hand onto the topographic maps since the format in which they were received was not compatible with the ESI data format. Following the data compilation phase, several sets of completed maps were sent out to the resource agencies for review, and edits were made based on recommendations by the resource experts. Invertebrate concentration information varied, and descriptive terms such as "HIGH", "MEDIUM", or "LOW" were used.

Process_Date: 200111 Process Contact:

Contact Information:

Contact Organization Primary:

Contact Organization: NOAA, Office of Response and Restoration

Contact Person: Jill Petersen

Contact Address:

Address_Type: Physical address Address: 7600 Sand Point Way, N.E.

City: Seattle

State_or_Province: Washington Postal_Code: 98115-6349

Contact_Voice_Telephone: (206) 526-6944 Contact_Facsimile_Telephone: (206) 526-6329

Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov

Spatial Data Organization Information:

Direct_Spatial_Reference_Method: Vector

Point and Vector Object Information:

SDTS Terms Description:

SDTS Point and Vector Object Type: GT-polygon composed of rings

Point and Vector Object Count: 74

 $SDTS_Terms_Description:$

SDTS Point and Vector Object Type: Area point

Point and Vector Object Count: 74

SDTS Terms Description:

SDTS Point and Vector Object Type: Complete chain

Point and Vector Object Count: 606

SDTS Terms Description:

SDTS_Point_and_Vector_Object_Type: Link Point and Vector Object Count: 250461

SDTS Terms Description:

SDTS_Point_and_Vector_Object_Type: Node, planar graph

Point_and_Vector_Object Count: 600

Spatial Reference Information:

Horizontal Coordinate System Definition:

Geographic:

Latitude_Resolution: 0.00005 Longitude Resolution: 0.00005 Geographic Coordinate Units: Decimal degrees

Geodetic Model:

Horizontal Datum Name: North American Datum of 1927

Ellipsoid_Name: Clark 1866 Semi-major Axis: 6378206.4

Denominator_of_Flattening_Ratio: 294.978698

Entity_and_Attribute_Information:

Overview_Description:

Entity and Attribute Overview:

In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, INVERT) is linked to the Biological Resources table (BIORES) using the unique ID and the lookup table BIO_LUT, or it can be linked directly using RARNUM. The ID is a unique combination of the atlas number (for the Aleutian Islands, the number is 72), an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described below in detail. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure. Due to the complexity of the relational database model, the data items are also post-processed into a flat file format. This table, called BIOFILE, may be used in place of the relational files described below to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN_SPEC, S_F, T_E, NHP, DATE_PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G_SOURCE, S_SOURCE, and BREED. All of these items are the same as their counterparts in the individual data tables described below, except the BREED1-BREED5 and BREED items. BREED is a newly generated variable used to link to the BREED DT data table, a modified, more compact version of the relational BREED data table. BREED1-BREED5 give a text summary of when each life stage occurs within the associated map object. The life stages referred to are the same as those listed in the Detailed_Description of the BREED data table. The link to the BIOFILE may be made through the BIO_LUT, using ID to link to RARNUM, or BIOFILE may be linked directly to the RARNUM in each of the geographic layer's attribute data tables. As mentioned, BREED_DT is an auxiliary support data table to the flat file structure, which allows the user to do searches based on month for seasonal breeding activities. The link from the flat file to BREED_DT is the BREED item. A second supporting data table is SOURCES. This is the same as the source file described above, and the link from the flat file is both G SOURCE and S SOURCE. It should be noted that although the flat file eases data query, it is not a normalized database structure, and actual updates performed by the states and other responsible agencies should be done using the relational data tables. The entity-relationship diagram describing relationships between attribute tables in the ESI data structure does NOT include the BIOFILE data table, and this data table is NOT described in detail below.

Detailed Description:

Entity Type:

Entity_Type_Label: INVERT.PAT

Entity Type Definition:

The INVERT.PAT table contains attribute information for the vector polygons representing invertebrate concentration areas. Note that all attribute information is stored in a series of relational files, described below. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.

Entity Type Definition Source: Research Planning, Inc.

Attribute:

Attribute_Label: ID Attribute Definition:

An identifier that links vector objects in the biology data layers to records in the BIO_LUT data table. ID is a concatenation of atlas number (72), element number (7), and record number. ID values of 9999 are holes in polygons and do not contain information.

Attribute Definition Source: NOAA

Attribute Domain Values:

Range Domain:

Range Domain Minimum: 720700002 Range Domain Maximum: 720700064

Attribute:

Attribute Label: RARNUM

Attribute Definition:

An identifier that links directly to the BIORES table or the flat format BIOFILE table. RARNUM values of 0 are holes in the polygons and do not contain information.

Attribute Definition Source: NOAA

Attribute Domain Values:

Range Domain:

Range_Domain_Minimum: 72000580 Range_Domain_Maximum: 72000588

Detailed Description:

Entity_Type:

Entity_Type_Label: BIO_LUT

Entity_Type_Definition:

The data table BIO_LUT is a lookup table that contains items necessary for linking vector objects in the biological data layers with the BIORES data table. Note that all attribute information is stored in a series of relational files, described below. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

Entity_Type_Definition_Source: Research Planning, Inc.

Attribute:

Attribute Label: RARNUM

 $Attribute _Definition:$

An identifier that links records in the BIO_LUT data table to records in the BIORES data table or the flat format BIOFILE data table. RARNUM values of 0 are holes in the polygons and do not contain information.

Attribute Definition Source: NOAA

Attribute Domain Values:

Range Domain:

Range_Domain_Minimum: 72000001 Range Domain Maximum: 72000615

Attribute:

Attribute_Label: ID

Attribute_Definition:

An identifier that links vector objects in the biology data layers to records in the BIO_LUT data table. ID is a concatenation of atlas number (72), element number (7), and record number. ID values of 9999 are holes in polygons and do not contain information.

Attribute Definition Source: NOAA

Attribute Domain Values:

Range Domain:

Range_Domain_Minimum: 720100002 Range_Domain_Maximum: 723400623

Detailed Description:

Entity Type:

Entity_Type_Label: BIORES

Entity Type Definition:

The data table BIORES contains both biological attribute data and items necessary for linking vector objects in the biological data layers via the BIO_LUT data table to other associated data tables. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

Entity Type Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: RARNUM

 $Attribute_Definition:$

An identifier that links records in the BIORES data table to records in the BIO_LUT data table or the flat format BIOFILE data table.

Attribute Definition Source: NOAA

Attribute Domain Values:

Range Domain:

Range_Domain_Minimum: 072000001 Range_Domain_Maximum: 072000615

Attribute:

Attribute_Label: SPECIES_ID

Attribute Definition:

Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA.

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Range Domain:

Range_Domain_Minimum: 1
Range_Domain_Maximum: N

Attribute:

Attribute Label: CONC

Attribute Definition:

The field CONC refers to "concentration," abundance, or density values, and may contain descriptive terms such as "HIGH" or "LOW", or it may be blank if the concentration is unknown.

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

```
Enumerated Domain:
                   Enumerated Domain Value: Any character
                   Enumerated Domain Value Definition: Free text
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: SEASON_ID
      Attribute Definition:
            Numeric identifier for the unique monthly presence and life history characteristics of each species at a given
            location.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Range Domain:
                   Range Domain Minimum: 1
                   Range Domain Maximum: N
Attribute:
      Attribute Label: G_SOURCE
      Attribute Definition:
            Geographic source identifier that links records in the BIORES data table to records in the SOURCES data table.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Range Domain:
                   Range Domain Minimum: 1
                   Range Domain Maximum: N
Attribute:
      Attribute Label: S SOURCE
      Attribute Definition:
            Seasonality source identifier that links records in the BIORES data table to records in the SOURCES data table.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Range Domain:
                   Range Domain Minimum: 1
                   Range Domain Maximum: N
Attribute:
      Attribute Label: ELEMENT
      Attribute Definition: Major categories of biological data
      Attribute Definition Source: Research Planning, Inc.
```

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: BIRD

Enumerated Domain Value Definition: Birds

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: FISH

Enumerated Domain Value Definition: Fish

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: HABITAT

Enumerated Domain Value Definition: Habitats and plants

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain_Value: INVERT

Enumerated Domain Value Definition: Invertebrates

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: M_MAMMAL

Enumerated Domain Value Definition: Marine mammals

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: REPTILE

Enumerated Domain Value Definition: Reptiles and Amphibians

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

```
Enumerated Domain:
```

Enumerated Domain Value: T MAMMAL

Enumerated Domain Value Definition: Terrestrial mammals

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute_Label: EL_SPE Attribute Definition:

Concatenation of ELEMENT and SPECIES_ID. This item links records in the BIORES data table to records in the SPECIES and STATUS data tables.

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated_Domain_Value: E#####
Enumerated_Domain_Value_Definition:

Where E is the first character of ELEMENT and the next five characters are SPECIES_ID (eg. ELEMENT = 'BIRD' and SPECIES_ID = 1; EL_SPE = 'B00001').

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute_Label: EL_SPE_SEA

 $Attribute_Definition:$

Concatenation of ELEMENT, SPECIES_ID, and SEASON_ID. This item links records in the BIORES data table to records in the SEASONAL and BREED data tables.

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain_Value: E#######
Enumerated Domain Value Definition:

Where E is the first character of ELEMENT, the next five characters are SPECIES_ID, and the last two characters are SEASON_ID (eg. ELEMENT = 'BIRD', SPECIES_ID = 1 and SEASON_ID = 1; EL_SPE_SEA = 'B0000101').

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Detailed Description:

Entity Type:

Entity Type Label: SPECIES

 $Entity_Type_Definition:$

The data table SPECIES identifies all species in the ESI data set. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure. Refer to the Completeness_Report for a list of layer-specific species.

Entity Type Definition Source: Research Planning, Inc.

Attribute:

Attribute_Label: SPECIES_ID

Attribute Definition:

Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA.

Attribute Definition Source: Research Planning, Inc.

Attribute_Domain_Values:

Range Domain:

Range_Domain_Minimum: 1
Range_Domain_Maximum: N

Attribute:

Attribute Label: NAME

Attribute Definition: Species common name

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated Domain:

Enumerated_Domain_Value: Species common name for the entire ESI data set

Enumerated Domain Value Definition: Free text

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: GEN SPEC

Attribute Definition: Species scientific name

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated_Domain_Value: Species scientific name for the entire ESI data set.

Enumerated Domain Value Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

```
Attribute:
```

Attribute Label: ELEMENT

Attribute_Definition: Major categories of biological data

Attribute Definition Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated Domain:

Enumerated Domain Value: BIRD

Enumerated Domain Value Definition: Birds

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated_Domain Value: FISH

Enumerated Domain Value Definition: Fish

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated Domain:

Enumerated Domain Value: HABITAT

Enumerated Domain Value Definition: Habitats and plants

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated Domain:

Enumerated Domain Value: INVERT

Enumerated Domain Value Definition: Invertebrates

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: M_MAMMAL

Enumerated Domain Value Definition: Marine Mammals

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: REPTILE

Enumerated_Domain_Value_Definition: Reptiles and Amphibians

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated_Domain_Value: T_MAMMAL

Enumerated Domain Value Definition: Terrestrial Mammals

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: SUBELEMENT

Attribute_Definition: Element subgroup delineating a logical grouping of species

Attribute Definition Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated Domain:

Enumerated_Domain_Value: alcid

Enumerated_Domain_Value_Definition: Alcid

Enumerated Domain Value Definition Source: Research Planning, Inc.

 $Attribute_Domain_Values:$

Enumerated Domain:

Enumerated Domain Value: bivalve

Enumerated Domain Value Definition: Bivalve

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: crab

Enumerated Domain Value Definition: Crab

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: diadromous

Enumerated Domain Value Definition: Diadromous fish

Enumerated Domain_Value_Definition_Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated_Domain:

Enumerated Domain Value: diving

Enumerated Domain Value Definition: Diving bird

```
Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: e_nursery
                  Enumerated_Domain_Value Definition: Estuarine nursery fish
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: gull_tern
                  Enumerated Domain Value Definition: Gull or tern
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: m_benthic
                  Enumerated Domain Value Definition: Marine benthic fish
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: m_pelagic
                  Enumerated Domain Value Definition: Marine pelagic fish
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: pelagic
                  Enumerated Domain Value Definition: Pelagic bird
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: pinniped
                  Enumerated Domain Value Definition: Pinniped
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: sav
                  Enumerated Domain Value Definition: Submersed aquatic vegetation
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: shorebird
                  Enumerated Domain Value Definition: Shorebird
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: sea_otter
                  Enumerated Domain Value Definition: Otter
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: waterfowl
                  Enumerated Domain Value Definition: Waterfowl
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: NHP
      Attribute Definition: Natural Heritage Program global ranking
      Attribute Definition Source: Network of Natural Heritage Program
      Attribute Domain Values:
            Codeset Domain:
                  Codeset Name: NHP Global Conservation Status Rank
                  Codeset Source: Natural Heritage Program
Attribute:
      Attribute Label: DATE_PUB
      Attribute Definition: Date of NHP listing
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: 0
                  Enumerated Domain Value Definition: Not ranked
```

```
Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                  Enumerated Domain:
                         Enumerated Domain Value: Numeric
                         Enumerated Domain Value Definition: mmyyyy
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
            Attribute_Label: EL_SPE
            Attribute Definition:
                  Concatenation of ELEMENT and SPECIES ID. This item links records in the SPECIES data table to records in
                  the BIORES and STATUS data tables.
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                  Enumerated Domain:
                         Enumerated Domain Value: E#####
                         Enumerated Domain Value Definition:
                               Where E is the first character of ELEMENT and the next five characters are SPECIES ID (eg.
                               ELEMENT = 'BIRD' and SPECIES_ID = 1; EL_SPE = 'B00001').
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
Detailed Description:
      Entity Type:
            Entity Type Label: SEASONAL
            Entity Type Definition:
                  The data table SEASONAL contains information on the seasonal presence of each species associated with each
                  spatial vector object. See the Browse_Graphic section for a link to the entity-relationship diagram, which
                  describes the way this table relates to other attribute tables in the ESI data structure.
            Entity Type Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: ELEMENT
            Attribute Definition: Major categories of biological data
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                  Enumerated Domain:
                         Enumerated Domain Value: BIRD
                         Enumerated Domain Value Definition: Birds
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                  Enumerated Domain:
                         Enumerated Domain Value: FISH
                         Enumerated Domain Value Definition: Fish
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                  Enumerated Domain:
                         Enumerated Domain Value: HABITAT
                         Enumerated Domain Value Definition: Habitats and plants
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                  Enumerated Domain:
                         Enumerated Domain Value: INVERT
                         Enumerated Domain Value Definition: Invertebrates
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                  Enumerated Domain:
                         Enumerated Domain Value: M_MAMMAL
                         Enumerated Domain Value Definition: Marine Mammals
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                  Enumerated Domain:
                         Enumerated Domain Value: REPTILE
                         Enumerated Domain Value Definition: Reptiles and Amphibians
```

Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain Value Definition: Terrestrial Mammals

Enumerated Domain Value: T_MAMMAL

Attribute:

Attribute Domain Values:

Enumerated Domain:

```
Attribute Label: SPECIES ID
      Attribute Definition:
            Numeric identifier for each species that is unique within each element and refers to a nationwide ESI species list
            maintained at NOAA.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Range Domain:
                   Range Domain Minimum: 1
                   Range Domain Maximum: N
Attribute:
      Attribute Label: SEASON ID
      Attribute Definition:
            Numeric identifier for the unique monthly presence and life history characteristics of each species at a given
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Range Domain:
                   Range Domain Minimum: 1
                   Range Domain Maximum: N
Attribute:
      Attribute Label: JAN
      Attribute Definition: January
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in January
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: FEB
      Attribute Definition: February
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in February
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: MAR
      Attribute Definition: March
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in March
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: APR
      Attribute Definition: April
      Attribute Definition Source: Research Planning, Inc.
      Attribute \begin{tabular}{l} -Domain\_Values: \\ \end{tabular}
            Enumerated Domain:
                   Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in April
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: MAY
      Attribute Definition: May
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in May
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: JUN
```

Attribute Definition: June

```
Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in June
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: JUL
      Attribute Definition: July
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in July
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: AUG
      Attribute Definition: August
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in August
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: SEP
      Attribute Definition: September
      Attribute Definition Source: Research Planning, Inc.
      Attribute_Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in September
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: OCT
      Attribute Definition: October
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in October
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: NOV
      Attribute Definition: November
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in November
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: DEC
      Attribute Definition: December
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in December
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: EL_SPE_SEA
      Attribute Definition:
            Concatenation of ELEMENT, SPECIES ID, and SEASON ID. This item links records in the SEASONAL data
            table to records in the BIORES and BREED data tables.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
```

```
Enumerated Domain:
```

Enumerated_Domain_Value: E######

Enumerated Domain Value Definition:

Where E is the first character of ELEMENT, the next five characters are SPECIES_ID, and the last two characters are SEASON_ID (eg. ELEMENT = 'BIRD', SPECIES_ID = 1 and SEASON_ID = 1; EL_SPE_SEA = 'B0000101').

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Detailed Description:

Entity_Type:

Entity_Type_Label: BREED

Entity Type Definition:

The data table BREED identifies the monthly presence of certain life-history stages or activities for each species at a given location.

Entity Type Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: EL_SPE_SEA

Attribute Definition:

Concatenation of ELEMENT, SPECIES_ID, and SEASON_ID. This item links records in the BREED data table to records in the BIORES and SEASONAL data tables.

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated_Domain_Value: E######

Enumerated_Domain_Value_Definition:

Where E is the first character of ELEMENT, the next five characters are SPECIES_ID, and the last two characters are SEASON_ID (eg. ELEMENT = 'BIRD', SPECIES_ID = 1 and SEASON_ID = 1; EL_SPE_SEA = 'B0000101').

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute_Label: MONTH

 $Attribute_Definition:$

Two-digit calendar month. Each life history stage or activity type for a particular species can have up to 12 records to account for each month of the year.

Attribute Definition Source: Research Planning, Inc.

Attribute_Domain_Values:

Range Domain:

Range_Domain_Minimum: 1 Range Domain Maximum: 12

Attribute:

Attribute_Label: BREED1

Attribute Definition:

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED1 = nesting; if ELEMENT is "FISH" then BREED1 = spawning; if ELEMENT is "INVERT" then BREED1 = spawning/mating; if ELEMENT is "REPTILE" then BREED1 = nesting; if ELEMENT is "M_MAMMAL" then BREED1 = mating.

This attribute is not used for HABITAT or T_MAMMAL elements.

Attribute Definition Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated Domain:

Enumerated Domain Value: Y

Enumerated_Domain_Value_Definition: Life-history stage or activity present

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated Domain:

Enumerated Domain Value: N

Enumerated_Domain_Value_Definition: Life-history stage or activity not present

Enumerated Domain Value Definition Source: Research Planning, Inc.

$Attribute_Domain_Values:$

Enumerated Domain:

Enumerated Domain Value: -

Enumerated Domain Value Definition:

Breed category not used or not appropriate for record(s) in question Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: BREED2

Attribute Definition:

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED2 = laying; if ELEMENT is "FISH" then BREED2 = eggs; if ELEMENT is "INVERT" then BREED2 = eggs; if ELEMENT is "REPTILE" then BREED2 = hatching; if ELEMENT is "M_MAMMAL" then BREED2 = calving. This attribute is not used

```
for HABITAT or T MAMMAL elements.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: Y
                   Enumerated Domain Value Definition: Life-history stage or activity present
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: N
                   Enumerated Domain Value Definition: Life-history stage or activity not present
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: -
                  Enumerated Domain Value Definition:
                         Breed category not used or not appropriate for record(s) in question
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: BREED3
      Attribute Definition:
            Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED3 = hatching; if ELEMENT is
            "FISH" then BREED3 = larvae; if ELEMENT is "INVERT" then BREED3 = larvae; if ELEMENT is
            "REPTILE" then BREED3 = internesting; if ELEMENT is "M_MAMMAL" then BREED3 = pupping. This
            attribute is not used for HABITAT or T_MAMMAL elements.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: Y
                  Enumerated Domain Value Definition: Life-history stage or activity present
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: N
                  Enumerated Domain Value Definition: Life-history stage or activity not present
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: -
                   Enumerated Domain Value Definition:
                         Breed category not used or not appropriate for record(s) in question
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: BREED4
      Attribute Definition:
            Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED4 = fledging; if ELEMENT is
             "FISH" then BREED4 = juvenile; if ELEMENT is "INVERT" then BREED4 = juvenile; if ELEMENT is
            "REPTILE" then BREED4 = juvenile; if ELEMENT is "M_MAMMAL" then BREED4 = molting. This
            attribute is not used for HABITAT or T MAMMAL elements.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: Y
                   Enumerated Domain Value Definition: Life-history stage or activity present
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: N
                   Enumerated Domain Value Definition: Life-history stage or activity not present
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: -
                   Enumerated Domain Value Definition:
                         Breed category not used or not appropriate for record(s) in question
```

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

```
Attribute Label: BREED5
            Attribute Definition:
                   Life history stage or activity type, where: if ELEMENT is "FISH" then BREED5 = adults; if ELEMENT is
                   "INVERT" then BREED5 = adults; if ELEMENT is "REPTILE" then BREED5 = adults. This attribute is not
                   used for BIRD, M_MAMMAL, HABITAT, or T_MAMMAL elements.
            Attribute Definition Source: Research Planning, Inc.
            Attribute_Domain_Values:
                   Enumerated Domain:
                         Enumerated Domain Value: Y
                         Enumerated Domain Value Definition: Life-history stage or activity present
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: N
                         Enumerated Domain Value Definition: Life-history stage or activity not present
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: -
                         Enumerated Domain Value Definition:
                                Breed category not used or not appropriate for record(s) in question
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
Detailed Description:
      Entity Type:
            Entity_Type Label: SOURCES
             Entity Type Definition:
                   The data table SOURCES contains the primary sources used to create the ESI data set. See the Browse_Graphic
                   section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute
                   tables in the ESI data structure.
             Entity Type Definition Source: Research Planning, Inc.
      Attribute:
             Attribute Label: SOURCE_ID
            Attribute Definition:
                   Source identifier that links records in the SOURCES data table to the items G_SOURCE and A_SOURCE in the
                   SOC_DAT table, and to G_SOURCE and S_SOURCE in the BIORES table.
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Range Domain:
                         Range Domain_Minimum: 1
                         Range Domain Maximum: N
      Attribute:
            Attribute Label: ORIGINATOR
            Attribute Definition: Author or developer of source material or data set
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: Any character
                         Enumerated Domain Value Definition: Free text
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: DATE_PUB
            Attribute Definition:
                   Date of source material, publication, or date of personal communication with expert source
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: Numeric
                         Enumerated Domain Value Definition: mmyyyy
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: TITLE
            Attribute Definition: Title of source material or data
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
```

Enumerated Domain Value: Any character Enumerated Domain Value Definition: Free text

```
Enumerated Domain Value Definition Source: Research Planning, Inc.
```

```
Attribute:
```

Attribute Label: DATA FORMAT

Attribute Definition: The format of the source material Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated_Domain_Value: Any character

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute Label: PUBLICATION

Attribute Definition: Additional citation information Attribute Definition Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated Domain:

Enumerated_Domain_Value: Any character Enumerated_Domain_Value_Definition: Free text

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: SCALE

Attribute_Definition: Scale denominator of the source Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated Domain:

Enumerated_Domain_Value: integer

Enumerated Domain Value Definition: Any integer

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute Label: TIME_PERIOD

Attribute Definition:

Date(s) of data collection that the source material is based upon.

Attribute_Definition_Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated_Domain_Value: Numeric

Enumerated_Domain_Value_Definition: yyyy

Enumerated Domain Value Definition Source: Research Planning, Inc.

$Detailed_Description:$

$Entity_Type:$

Entity_Type_Label: STATUS

Entity_Type_Definition:

The data table STATUS identifies the species that are listed as either threatened or endangered by a state or federal authority. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

Entity Type Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: ELEMENT

Attribute Definition: Major categories of biological data Attribute Definition Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated Domain:

Enumerated_Domain_Value: BIRD

Enumerated Domain Value Definition: Birds

Enumerated Domain Value Definition Source: Research Planning, Inc.

$Attribute_Domain_Values:$

Enumerated Domain:

Enumerated Domain Value: FISH

Enumerated Domain Value Definition: Fish

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated_Domain_Value: HABITAT

Enumerated Domain Value Definition: Habitats and Plants

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

```
Enumerated Domain Value: INVERT
                  Enumerated Domain Value Definition: Invertebrates
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: M_MAMMAL
                  Enumerated Domain Value Definition: Marine Mammals
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: REPTILE
                  Enumerated Domain Value Definition: Reptiles and Amphibians
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: T_MAMMAL
                  Enumerated Domain Value Definition: Terrestrial Mammals
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: SPECIES ID
      Attribute Definition:
            Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI
            species list maintained at NOAA
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Range Domain:
                  Range Domain Minimum: 1
                  Range Domain Maximum: N
Attribute:
      Attribute Label: STATE
      Attribute Definition: Two-letter state abbreviation
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: Any character
                  Enumerated Domain Value Definition: Two-letter state abbreviation
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: S_F
      Attribute Definition: State and Federal status.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: F
                  Enumerated Domain Value Definition: Federally listed
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: S
                  Enumerated_Domain_Value_Definition: State listed
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: S/F
                  Enumerated Domain Value Definition: State and federally listed
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: T_E
      Attribute Definition: Threatened and endangered status.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: E
                  Enumerated Domain Value Definition: Endangered on state or federal list
                  Enumerated Domain_Value_Definition_Source: U.S. Fish and Wildlife Service
      Attribute Domain Values:
```

Enumerated Domain:

Enumerated Domain Value: T

Enumerated Domain Value Definition: Threatened on state or federal list Enumerated Domain Value Definition Source: U.S. Fish and Wildlife Service

Attribute:

Attribute Label: DATE_PUB

Attribute Definition:

Publication date of source material used to assign state and federal status values for each species, if used.

Attribute Definition Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated Domain:

Enumerated Domain Value: Numeric

Enumerated Domain Value Definition: mmyyyy

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute_Label: EL_SPE Attribute Definition:

Concatenation of ELEMENT and SPECIES_ID. This item links the STATUS data table to the BIORES and SPECIES data tables

SPECIES data tables.

Attribute Definition Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated Domain:

Enumerated_Domain_Value: E#####
Enumerated Domain Value Definition:

Where E is the first character of ELEMENT and the next five characters are SPECIES_ID (eg.

ELEMENT = 'BIRD' and SPECIES_ID = 1; EL_SPE = 'B00001'). Enumerated Domain Value Definition Source: Research Planning, Inc.

Distribution Information:

Distributor:

Contact Information:

Contact Person Primary:

Contact Person: John Kaperick

Contact Organization: NOAA, Office of Response and Restoration

Contact Address:

Address_Type: Physical Address Address: 7600 Sand Point Way, N.E.

City: Seattle

State_or_Province: Washington Postal Code: 98115-6349

Contact_Voice_Telephone: (206) 526-6400 Contact Facsimile Telephone: (206) 526-6329

Resource Description: ESI Atlas for the Aleutian Islands

Distribution_Liability:

Although these data have been processed successfully on a computer system at the National Oceanic and Atmospheric Administration, no warranty, expressed or implied, is made by NOAA regarding the utility of the data on any other system, nor shall the act of distribution constitute any such warranty. NOAA warrants the delivery of this product in computer-readable format, and will offer a replacement copy of the product when the product is determined unreadable by computer-input peripherals, or when the physical medium is delivered in damaged condition.

Custom Order Process:

Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to a wider community of GIS/mapping users. Distribution formats include ARC export, MOSS and Shape files, and MARPLOT map folders. An ArcView ESI project and ESI_Viewer product are also included on the distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

Metadata Reference Information:

Metadata Date: 200205

Metadata Review Date: 200205

Metadata Contact:

Contact Information:

Contact Person Primary:

Contact Person: Jill Petersen

Contact Organization: NOAA, Office of Response and Restoration

Contact Position: GIS Manager

Contact_Address:

Address_Type: Physical Address Address: 7600 Sand Point Way, N.E.

City: Seattle

State_or_Province: Washington Postal_Code: 98115-6349

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Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov Metadata_Standard_Name: Content Standards for Digital Geospatial Metadata

Metadata_Standard_Version: FGDC-STD-001-1998

Generated by mp version 2.7.23 on Thu May 16 15:35:14 2002

Aleutian Islands Coastal Resources Inventory and Environmental Sensitivity Maps: M_MAMMAL (Marine Mammal Polygons)

Metadata also available as - [Parseable text] - [SGML]

Metadata:

- Identification Information
- Data Quality Information
- Spatial Data Organization Information
- Spatial Reference Information
- Entity and Attribute Information
- Distribution Information
- Metadata Reference Information

Identification Information:

Citation:

Citation Information:

Originator:

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Prince William Sound Oil Spill Recovery Institute; Aleutians West Coastal Resource Service Area (CRSA); Aleutians East Borough; Alaska Chadux Corporation; United States Coast Guard; and National Fish & Wildlife Foundation.

Publication Date: 200205

Title:

Aleutian Islands Coastal Resources Inventory and Environmental Sensitivity Maps: M_MAMMAL (Marine Mammal Polygons)

Edition: First

Geospatial Data Presentation Form: Digital vector data

Series Information:

Series Name: None

Issue Identification: Aleutian Islands

Publication Information:

Publication Place: Seattle, Washington

Publisher:

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington

Other Citation Details:

Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Prince William Sound Oil Spill Recovery Institute; Aleutians West Coastal Resource Service Area (CRSA); Aleutians East Borough; Alaska Chadux Corporation; United States Coast Guard; and National Fish & Wildlife Foundation.

Description:

Abstract

This data set contains biological resource data for sea otters and walrus in the Aleutian Islands, Alaska. Vector polygons in this data set represent locations of marine mammal concentrations. Species-specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for Aleutians East Borough and Aleutians West Coastal Resource Service Area (CRSA). These data identify the marine and coastal environments and wildlife. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources. See also the M_MAMPT (Marine Mammal Points) data layer, part of the larger Aleutians East/Aleutians West ESI database, for haulout and rookery sites for seals and seal lions..

Purpose:

The ESI data were collected, mapped, and digitized to provide environmental data for oil spill planning and response. The Clean Water Act with amendments by the Oil Pollution Act of 1990 requires response plans for immediate and effective protection of sensitive resources.

Time Period of Content:

Time Period Information:

Range of Dates/Times:

Beginning_Date: 2000 Ending Date: 2001

Currentness Reference:

The biological data were compiled during 2000-2001. The currentness dates for these data range from 1982 to 2001

and are documented in the Source Information section.

Status:

Progress: Complete

Maintenance and Update Frequency: None Scheduled

Spatial Domain:

Bounding Coordinates:

West_Bounding_Coordinate: 172.42000 East_Bounding_Coordinate: -158.81002 North_Bounding_Coordinate: 58.133120 South Bounding_Coordinate: 48.351629

Keywords:

Theme:

Theme Keyword Thesaurus: None

Theme Keyword: ESI

Theme_Keyword: Sensitivity maps Theme_Keyword: Coastal resources Theme_Keyword: Oil spill planning

Theme Keyword: Coastal Zone Management

Theme Keyword: Wildlife

Theme Keyword: Marine Mammal

Place:

Place Keyword Thesaurus: None Place Keyword: Aleutian Islands

Access Constraints: None

Use Constraints:

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

Browse Graphic:

Browse_Graphic_File_Name: datafig.jpg Browse Graphic File Description:

Relationships between spatial data layers and attribute data tables for the Aleutian Islands ESI data.

Browse Graphic File Type: JPEG

Data Set Credit:

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Prince William Sound Oil Spill Recovery Institute; Aleutians West Coastal Resource Service Area (CRSA); Aleutians East Borough; Alaska Chadux Corporation; United States Coast Guard; and National Fish & Wildlife Foundation.

Native Data Set Environment:

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.0.2) and ORACLE(r) RDBMS (version 8.0.5.0.0). The hardware configuration is Hewlett Packard workstations (models 715/50 and 712/80i) with UNIX operating system (HP-UX Release A.10.20), and PC's with Windows Operating System (NT4.0/2000). The Spatial_Data_Organization Information section refers only to the source files in the ARC export format. The following files are included in that data set: birds.e00, bio_lut.e00, biofile.e00, biores.e00, breed_e00, breed_dt.e00, esi.e00, faults.e00, fish.e00, fishl.e00, geo.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, m_mampt.e00, mgt.e00, nests.e00, seasonal.e00, soc_dat.e00, soc_lut.e00, socecon.e00, sources.e00, species.e00, status.e00, volcanos.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biofile, biores, breed_dt, seasonal, soc_dat, soc_lut, socecon, sources, species, and status.

Data_Quality_Information:

Attribute Accuracy:

Attribute Accuracy Report:

A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.

Logical Consistency Report:

A multi-stage error checking process, described in the above Attribute_Accuracy_Report, is used to verify both attribute

accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary node, etc.), and ORACLE(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks. In the process of checking for topological and database consistencies, new ID's and RARNUM's or HUNUM's are also generated. The new ID's are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon, a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "resource at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

Completeness Report:

These data represent a synthesis of expert knowledge and available hardcopy reports on concentration areas. Refer to the M_MAMPT (Marine Mammal Points) data layer for additional haulout information. These data do not necessarily represent all marine mammal occurrences in the Aleutian Islands, Alaska. The following species are included in this data set (Species_ID, Common Name, Scientific Name, if applicable): 7, Sea otter, Enhydra lutris; 16, Walrus, Odobenus rosmarus.

Positional Accuracy:

Horizontal_Positional_Accuracy:

Horizontal Positional Accuracy Report:

Most of the spatial components of the biological data sets are developed using regional experts who estimate concentration areas. It is difficult to estimate the positional accuracy of such data, except to state that they are compiled on hardcopy basemaps with a scale of 1:250,000. Note that biological resource data by their very nature are considered "fuzzy", and this should be understood when considering the positional accuracy of vector digital objects representing these resources.

Lineage:

Source Information:

Source Citation:

Citation Information:

Originator: Mark Fink, Alaska Department of Fish and Game

Publication Date: Unpublished material Title: Most Environmentally Sensitive Areas

Geospatial Data Presentation Form: Hardcopy Map

Source Scale Denominator: 250000

Type_of_Source_Media: Electronic mail service

Source_Time_Period_of_Content:

Time Period Information:

Single Date/Time:

Calendar Date: 2000

Source_Currentness_Reference: Date of study

Source Citation Abbreviation: None

Source_Contribution: Marine Mammal Information

Source Information:

Source Citation:

Citation Information:

Originator: Angie Doroff - U.S. Fish and Wildlife Service

Publication_Date: Unpublished material Title: Sea Otter Surveys of the Aleutian Islands

Geospatial Data Presentation Form: Hardcopy Map

Source Scale Denominator: 250000

Type of Source Media: Paper

Source_Time_Period_of_Content:

 \overline{T} ime \overline{P} eriod \overline{I} nformation:

Single_Date/Time:

Calendar Date: 2000

Source Currentness Reference: Date of study

Source Citation Abbreviation: None

Source Contribution: Marine Mammal Information

Source Information:

Source Citation:

Citation_Information:

Originator: Alaska Department of Fish and Game

Publication Date: 1984

Title: Habitat Management Guides

Geospatial Data Presentation Form: Hardcopy Map

Publication_Information:

Publication Place: Anchorage, Alaska

Publisher: Alaska Department of Fish and Game

```
Source Scale Denominator: 250000
      Type of Source Media: Paper
      Source Time Period of Content:
             \overline{T}ime \overline{P}eriod \overline{I}nformation:
                   Single Date/Time:
                          Calendar Date: 1982
             Source Currentness Reference: Date of study
      Source Citation Abbreviation: None
      Source Contribution: Marine Mammal Information
Source Information:
      Source Citation:
             Citation Information:
                   Originator: Melia Knecht
                   Publication Date: Unpublished material
                   Title: Personal Communication
                   Geospatial Data Presentation Form: Hardcopy Map
      Source Scale Denominator: 250000
      Type of Source Media: Paper
      Source Time Period of Content:
             Time Period Information:
                   Single Date/Time:
                          Calendar Date: 2000
             Source Currentness Reference: Date of Communication
      Source Citation Abbreviation: None
      Source Contribution: Marine Mammal Information
Process Step:
      Process Description:
```

Data used to depict marine mammal distribution for this data layer came from personal interviews with resource experts from the U.S. Fish & Wildlife Service (USFWS) in Anchorage and with locals who had expert knowledge, and from Alaska Dept. of Fish and Game's Most Environmentally Sensitive Areas maps. Information gathered from the interviews and other maps were compiled onto 1:250,000 scale USGS topographic maps. Following the data compilation phase, several sets of completed maps were sent out to the resource agencies for review, and edits were made based on recommendations by the resource experts. Concentration information varied, and therefore for some species and locations, descriptive terms such as "HIGH", "MEDIUM", or "LOW"" were used, while for others, numerical counts of nests or individuals were used. In many cases, concentration information was provided by resource experts.

used. In many cases, concentration information was provided by resource experts.

Process_Date: 200111

Process_Contact:

Contact_Information:

Contact_Organization_Primary:

Contact_Organization: NOAA, Office of Response and Restoration

Contact_Person: Jill Petersen

Contact_Address:

Address_Type: Physical address

Address: 7600 Sand Point Way, N.E.

City: Seattle

State_or_Province: Washington

Postal_Code: 98115-6349

Contact_Voice_Telephone: (206) 526-6944

Contact_Facsimile_Telephone: (206) 526-6329

Contact Electronic Mail Address: Jill.Petersen@noaa.gov

```
Spatial_Data_Organization_Information:
    Direct_Spatial_Reference_Method: Vector
    Point_and_Vector_Object_Information:
        SDTS_Terms_Description:
        SDTS_Point_and_Vector_Object_Type: GT-polygon composed of rings
        Point_and_Vector_Object_Count: 1754

SDTS_Terms_Description:
        SDTS_Point_and_Vector_Object_Type: Area point
        Point_and_Vector_Object_Count: 1754

SDTS_Terms_Description:
        SDTS_Point_and_Vector_Object_Type: Complete chain
        Point_and_Vector_Object_Count: 3157

SDTS_Terms_Description:
```

SDTS_Point_and_Vector_Object_Type: Link Point_and_Vector_Object_Count: 757732

SDTS Terms Description:

SDTS_Point_and_Vector_Object_Type: Node, planar graph

Point and Vector Object Count: 3149

Spatial_Reference_Information:

Horizontal Coordinate System Definition:

Geographic:

Latitude_Resolution: 0.00005 Longitude_Resolution: 0.00005

Geographic_Coordinate_Units: Decimal degrees

Geodetic Model:

Horizontal Datum Name: North American Datum of 1927

Ellipsoid_Name: Clark 1866 Semi-major Axis: 6378206.4

Denominator of Flattening Ratio: 294.978698

Entity and Attribute Information:

Overview Description:

Entity_and_Attribute_Overview:

In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, M_MAMMAL) is linked to the Biological Resources table (BIORES) using the unique ID and the lookup table BIO_LUT, or it can be linked directly using RARNUM. The ID is a unique combination of the atlas number (for the Aleutian Islands, it is 72), an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described below in detail. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure. Due to the complexity of the relational database model, the data items are also post-processed into a flat file format. This table, called BIOFILE, may be used in place of the relational files described below to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN_SPEC, S_F, T_E, NHP, DATE_PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G SOURCE, S SOURCE, and BREED. All of these items are the same as their counterparts in the individual data tables described below, except the BREED1-BREED5 and BREED items. BREED is a newly generated variable used to link to the BREED_DT data table, a modified, more compact version of the relational BREED data table. BREED1-BREED5 give a text summary of when each life stage occurs within the associated map object. The life stages referred to are the same as those listed in the Detailed Description of the BREED data table. The link to the BIOFILE may be made through the BIO LUT, using ID to link to RARNUM, or BIOFILE may be linked directly to the RARNUM in each of the geographic layer's attribute data tables. As mentioned, BREED DT is an auxiliary support data table to the flat file structure, which allows the user to do searches based on month for seasonal breeding activities. The link from the flat file to BREED DT is the BREED item. A second supporting data table is SOURCES. This is the same as the source file described above, and the link from the flat file is both G SOURCE and S SOURCE. It should be noted that although the flat file eases data query, it is not a normalized database structure, and actual updates performed by the states and other responsible agencies should be done using the relational data tables. The entity-relationship diagram describing relationships between attribute tables in the ESI data structure does NOT include the BIOFILE data table, and this data table is NOT described in detail below.

Detailed Description:

Entity_Type:

Entity Type Label: M_MAMMAL.PAT

Entity Type Definition:

The M_MAMMAL.PAT table contains attribute information for the vector polygons representing marine mammal distribution. Note that all attribute information is stored in a series of relational files, described below. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.

Entity Type Definition Source: Research Planning, Inc.

Attribute:

Attribute_Label: ID Attribute Definition:

An identifier that links vector objects in the biology data layers to records in the BIO_LUT data table. ID is a concatenation of atlas number (72), element number (4), and record number. ID values of 9999 are holes in polygons and do not contain information.

```
Attribute Definition Source: NOAA
```

Attribute Domain Values:

Range Domain:

Range_Domain_Minimum: 720400002 Range_Domain_Maximum: 724001758

Attribute:

Attribute Label: RARNUM

Attribute Definition:

An identifier that links directly to the BIORES table or the flat format BIOFILE table. RARNUM values of 0 are holes in the polygons and do not contain information.

Attribute_Definition_Source: NOAA

Attribute Domain Values:

Range Domain:

Range_Domain_Minimum: 72000589 Range Domain Maximum: 72000615

Detailed Description:

$Entity_Type:$

Entity Type Label: BIO_LUT

Entity_Type_Definition:

The data table BIO_LUT is a lookup table that contains items necessary for linking vector objects in the biological data layers with the BIORES data table. Note that all attribute information is stored in a series of relational files, described below. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

Entity_Type_Definition_Source: Research Planning, Inc.

Attribute:

Attribute Label: RARNUM

Attribute Definition:

An identifier that links records in the BIO_LUT data table to records in the BIORES data table or the flat format BIOFILE data table. RARNUM values of 0 are holes in the polygons and do not contain information.

Attribute_Definition_Source: NOAA

Attribute Domain Values:

Range Domain:

Range Domain Minimum: 72000001 Range Domain Maximum: 72000615

Attribute:

Attribute_Label: ID Attribute Definition:

An identifier that links vector objects in the biology data layers to records in the BIO_LUT data table. ID is a concatenation of atlas number (72), element number (4), and record number. ID values of 9999 are holes in polygons and do not contain information.

Attribute Definition Source: NOAA

Attribute Domain Values:

Range_Domain:

Range Domain Minimum: 720100002 Range Domain Maximum: 723400623

$Detailed_Description:$

Entity_Type:

Entity_Type_Label: BIORES Entity_Type_Definition:

The data table BIORES contains both biological attribute data and items necessary for linking vector objects in the biological data layers via the BIO_LUT data table to other associated data tables. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

Entity_Type_Definition_Source: Research Planning, Inc.

Attribute:

Attribute Label: RARNUM

Attribute_Definition:

An identifier that links records in the BIORES data table to records in the BIO_LUT data table or the flat format BIOFILE data table.

Attribute Definition Source: NOAA

Attribute Domain Values:

Range Domain:

Range_Domain_Minimum: 072000001 Range_Domain_Maximum: 072000615

Attribute:

Attribute Label: SPECIES_ID

Attribute Definition:

Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI

```
species list maintained at NOAA.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Range Domain:
                   Range Domain Minimum: 1
                   Range Domain Maximum: N
Attribute:
      Attribute Label: CONC
      Attribute Definition:
            The field CONC refers to "concentration," abundance, or density values, and contains descriptive terms, such as
             "HIGH" or "LOW" for sea otters, but includes an estimated count of number of individuals for walrus.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: Any character
                   Enumerated Domain Value Definition: Free text
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: SEASON ID
      Attribute Definition:
            Numeric identifier for the unique monthly presence and life history characteristics of each species at a given
      Attribute Definition Source: Research Planning, Inc.
      Attribute_Domain Values:
            Range Domain:
                   Range Domain Minimum: 1
                   Range Domain Maximum: N
Attribute:
      Attribute Label: G_SOURCE
      Attribute Definition:
            Geographic source identifier that links records in the BIORES data table to records in the SOURCES data table.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Range Domain:
                   Range Domain Minimum: 1
                  Range Domain Maximum: N
Attribute:
      Attribute Label: S_SOURCE
      Attribute Definition:
            Seasonality source identifier that links records in the BIORES data table to records in the SOURCES data table.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Range Domain:
                   Range Domain Minimum: 1
                   Range Domain Maximum: N
Attribute:
      Attribute Label: ELEMENT
      Attribute Definition: Major categories of biological data
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: BIRD
                   Enumerated Domain Value Definition: Birds
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: FISH
                   Enumerated Domain Value Definition: Fish
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: HABITAT
                   Enumerated Domain Value Definition: Habitats and plants
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
```

Enumerated Domain Value: INVERT

```
Aleutian Islands Coastal Resources Inventory and
                   Enumerated Domain Value Definition: Invertebrates
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: M MAMMAL
                   Enumerated Domain Value Definition: Marine mammals
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: REPTILE
                   Enumerated Domain Value Definition: Reptiles and Amphibians
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: T MAMMAL
                   Enumerated Domain Value Definition: Terrestrial mammals
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: EL_SPE
      Attribute Definition:
            Concatenation of ELEMENT and SPECIES ID. This item links records in the BIORES data table to records in
            the SPECIES and STATUS data tables.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: E#####
                   Enumerated Domain Value Definition:
                         Where E is the first character of ELEMENT and the next five characters are SPECIES ID (eg.
                         ELEMENT = 'BIRD' and SPECIES ID = 1; EL SPE = 'B00001').
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: EL_SPE_SEA
      Attribute Definition:
            Concatenation of ELEMENT, SPECIES ID, and SEASON ID. This item links records in the BIORES data
            table to records in the SEASONAL and BREED data tables.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: E######
                   Enumerated Domain Value Definition:
                         Where E is the first character of ELEMENT, the next five characters are SPECIES_ID, and the
                         last two characters are SEASON_ID (eg. ELEMENT = 'BIRD', SPECIES_ID = 1 and
                         SEASON_ID = 1; EL_SPE_SEA = 'B0000101').
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
      Entity Type Label: SPECIES
      Entity Type Definition:
            The data table SPECIES identifies all species in the ESI data set. See the Browse_Graphic section for a link to
            the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI
            data structure. Refer to the Completeness_Report for a list of layer-specific species.
      Entity Type Definition Source: Research Planning, Inc.
      Attribute Label: SPECIES_ID
      Attribute Definition:
```

Detailed Description:

```
Entity Type:
```

Attribute:

Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA.

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Range Domain:

Range Domain Minimum: 1 Range Domain Maximum: N

Attribute:

Attribute Label: NAME

Attribute Definition: Species common name

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

```
Enumerated Domain:
```

Enumerated Domain Value: Species common name for the entire ESI data set

Enumerated Domain Value Definition: Free text

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: GEN SPEC

Attribute Definition: Species scientific name

Attribute Definition Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated Domain:

Enumerated Domain Value: Species scientific name for the entire ESI data set.

Enumerated Domain Value Definition: Free text

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: ELEMENT

Attribute_Definition: Major categories of biological data

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: BIRD

Enumerated Domain Value Definition: Birds

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: FISH

Enumerated Domain Value Definition: Fish

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: HABITAT

Enumerated_Domain_Value_Definition: Habitats and plants

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated Domain:

Enumerated Domain Value: INVERT

Enumerated Domain Value Definition: Invertebrates

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: M_MAMMAL

Enumerated Domain Value Definition: Marine Mammals

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated_Domain:

Enumerated Domain Value: REPTILE

Enumerated_Domain_Value_Definition: Reptiles and Amphibians

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: T_MAMMAL

Enumerated Domain Value Definition: Terrestrial Mammals

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: SUBELEMENT

Attribute Definition: Element subgroup delineating a logical grouping of species

Attribute_Definition_Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: alcid

Enumerated Domain Value Definition: Alcid

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: bivalve

Enumerated Domain Value Definition: Bivalve

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

```
Enumerated_Domain:
```

Enumerated Domain Value: crab

Enumerated Domain Value Definition: Crab

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: diadromous

Enumerated Domain Value Definition: Diadromous fish

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: diving

Enumerated_Domain_Value_Definition: Diving bird

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated Domain:

Enumerated_Domain_Value: e_nursery

Enumerated_Domain_Value_Definition: Estuarine nursery fish

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: gull_tern

Enumerated Domain Value Definition: Gull or tern

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated_Domain_Value: m_benthic

Enumerated Domain Value Definition: Marine benthic fish

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated Domain:

Enumerated Domain Value: m_pelagic

Enumerated_Domain_Value_Definition: Marine pelagic fish

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: pelagic

Enumerated Domain Value Definition: Pelagic bird

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: pinniped

Enumerated Domain Value Definition: Pinniped

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated Domain Value: sav

Enumerated Domain Value Definition: Submersed aquatic vegetation

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: shorebird

Enumerated Domain Value Definition: Shorebird

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: sea_otter

Enumerated Domain Value Definition: Otter

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: waterfowl

Enumerated Domain Value Definition: Waterfowl

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: NHP

Attribute Definition: Natural Heritage Program global ranking

```
Attribute Definition Source: Network of Natural Heritage Program
            Attribute Domain Values:
                   Codeset Domain:
                         Codeset Name: NHP Global Conservation Status Rank
                         Codeset Source: Natural Heritage Program
      Attribute:
            Attribute Label: DATE PUB
            Attribute Definition: Date of NHP listing
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: 0
                         Enumerated Domain Value Definition: Not ranked
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: Numeric
                         Enumerated Domain Value Definition: mmyyyy
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: EL_SPE
            Attribute Definition:
                   Concatenation of ELEMENT and SPECIES_ID. This item links records in the SPECIES data table to records in
                   the BIORES and STATUS data tables.
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain_Value: E#####
                         Enumerated Domain Value Definition:
                               Where E is the first character of ELEMENT and the next five characters are SPECIES ID (eg.
                               ELEMENT = 'BIRD' and SPECIES_ID = 1; EL_SPE = 'B00001').
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
Detailed Description:
      Entity Type:
            Entity Type Label: SEASONAL
            Entity Type Definition:
                   The data table SEASONAL contains information on the seasonal presence of each species associated with each
                   spatial vector object. See the Browse Graphic section for a link to the entity-relationship diagram, which
                   describes the way this table relates to other attribute tables in the ESI data structure.
            Entity Type Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: ELEMENT
            Attribute Definition: Major categories of biological data
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: BIRD
                         Enumerated_Domain_Value Definition: Birds
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: FISH
                         Enumerated Domain Value Definition: Fish
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: HABITAT
                         Enumerated Domain Value Definition: Habitats and plants
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: INVERT
                         Enumerated Domain Value Definition: Invertebrates
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
```

Enumerated Domain Value: M_MAMMAL

```
Enumerated Domain Value Definition: Marine Mammals
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: REPTILE
                   Enumerated_Domain_Value Definition: Reptiles and Amphibians
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: T MAMMAL
                   Enumerated Domain Value Definition: Terrestrial Mammals
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: SPECIES_ID
      Attribute Definition:
            Numeric identifier for each species that is unique within each element and refers to a nationwide ESI species list
            maintained at NOAA.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Range Domain:
                  Range Domain Minimum: 1
                  Range Domain Maximum: N
Attribute:
      Attribute Label: SEASON ID
      Attribute Definition:
            Numeric identifier for the unique monthly presence and life history characteristics of each species at a given
            location.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain_Values:
            Range Domain:
                  Range Domain Minimum: 1
                  Range Domain Maximum: N
Attribute:
      Attribute Label: JAN
      Attribute Definition: January
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: X
                  Enumerated Domain Value Definition: Present in January
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: FEB
      Attribute Definition: February
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in February
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: MAR
      Attribute Definition: March
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in March
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: APR
      Attribute Definition: April
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in April
```

```
Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Label: MAY
Attribute Definition: May
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
            Enumerated Domain Value: X
            Enumerated Domain Value Definition: Present in May
            Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Label: JUN
Attribute Definition: June
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
            Enumerated Domain Value: X
            Enumerated Domain Value Definition: Present in June
            Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Label: JUL
Attribute Definition: July
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
            Enumerated Domain Value: X
            Enumerated Domain Value Definition: Present in July
            Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Label: AUG
Attribute Definition: August
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
            Enumerated Domain Value: X
            Enumerated Domain Value Definition: Present in August
            Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Label: SEP
Attribute Definition: September
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
            Enumerated Domain Value: X
            Enumerated Domain Value Definition: Present in September
            Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Label: OCT
Attribute Definition: October
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
            Enumerated Domain Value: X
            Enumerated Domain Value Definition: Present in October
            Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Label: NOV
```

Attribute:

Attribute:

Attribute:

Attribute:

Attribute:

Attribute:

Attribute:

Attribute:

Attribute Label: DEC

Attribute Definition: December

Attribute_Definition: November

Enumerated Domain:

Attribute Domain Values:

Attribute Definition Source: Research Planning, Inc.

Enumerated Domain Value: X

Enumerated Domain Value Definition: Present in November

Enumerated Domain Value Definition Source: Research Planning, Inc.

```
Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: X
                         Enumerated Domain Value Definition: Present in December
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: EL SPE SEA
            Attribute Definition:
                   Concatenation of ELEMENT, SPECIES ID, and SEASON ID. This item links records in the SEASONAL data
                   table to records in the BIORES and BREED data tables.
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: E#######
                         Enumerated Domain Value Definition:
                               Where E is the first character of ELEMENT, the next five characters are SPECIES ID, and the
                               last two characters are SEASON_ID (eg. ELEMENT = 'BIRD', SPECIES_ID = 1 and
                               SEASON_ID = 1; EL_SPE_SEA = 'B0000101').
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
Detailed Description:
      Entity_Type:
            Entity Type Label: BREED
            Entity Type Definition:
                   The data table BREED identifies the monthly presence of certain life-history stages or activities for each species
                   at a given location.
            Entity Type Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: EL_SPE_SEA
            Attribute Definition:
                   Concatenation of ELEMENT, SPECIES ID, and SEASON ID. This item links records in the BREED data
                   table to records in the BIORES and SEASONAL data tables.
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: E######
                         Enumerated Domain Value Definition:
                               Where E is the first character of ELEMENT, the next five characters are SPECIES_ID, and the
                               last two characters are SEASON_ID (eg. ELEMENT = 'BIRD', SPECIES_ID = 1 and
                               SEASON ID = 1; EL SPE SEA = 'B0000101').
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
            Attribute_Label: MONTH
            Attribute Definition:
                   Two-digit calendar month. Each life history stage or activity type for a particular species can have up to 12
                   records to account for each month of the year.
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Range Domain:
                         Range Domain Minimum: 1
                         Range Domain Maximum: 12
      Attribute:
            Attribute Label: BREED1
            Attribute Definition:
                   Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED1 = nesting: if ELEMENT is
                   "FISH" then BREED1 = spawning; if ELEMENT is "INVERT" then BREED1 = spawning/mating; if
                   ELEMENT is "REPTILE" then BREED1 = nesting; if ELEMENT is "M_MAMMAL" then BREED1 = mating.
                   This attribute is not used for HABITAT or T_MAMMAL elements.
            Attribute Definition Source: Research Planning, Inc.
            Attribute_Domain_Values:
                   Enumerated Domain:
                         Enumerated Domain Value: Y
                         Enumerated Domain Value Definition: Life-history stage or activity present
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: N
```

Enumerated Domain Value Definition: Life-history stage or activity not present

```
Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: -
                   Enumerated Domain Value Definition:
                         Breed category not used or not appropriate for record(s) in question
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: BREED2
      Attribute Definition:
            Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED2 = laying; if ELEMENT is
            "FISH" then BREED2 = eggs; if ELEMENT is "INVERT" then BREED2 = eggs; if ELEMENT is "REPTILE"
            then BREED2 = hatching; if ELEMENT is "M_MAMMAL" then BREED2 = calving. This attribute is not used
            for HABITAT or T_MAMMAL elements.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: Y
                  Enumerated Domain Value Definition: Life-history stage or activity present
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: N
                  Enumerated Domain Value Definition: Life-history stage or activity not present
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: -
                   Enumerated Domain Value Definition:
                         Breed category not used or not appropriate for record(s) in question
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: BREED3
      Attribute Definition:
            Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED3 = hatching; if ELEMENT is
             "FISH" then BREED3 = larvae; if ELEMENT is "INVERT" then BREED3 = larvae; if ELEMENT is
            "REPTILE" then BREED3 = internesting; if ELEMENT is "M_MAMMAL" then BREED3 = pupping. This
            attribute is not used for HABITAT or T_MAMMAL elements.
      Attribute Definition Source: Research Planning, Inc.
      Attribute_Domain_Values:
            Enumerated Domain:
                  Enumerated Domain Value: Y
                  Enumerated Domain Value Definition: Life-history stage or activity present
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: N
                  Enumerated Domain Value Definition: Life-history stage or activity not present
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: -
                   Enumerated_Domain_Value Definition:
                         Breed category not used or not appropriate for record(s) in question
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute_Label: BREED4
      Attribute Definition:
            Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED4 = fledging; if ELEMENT is
            "FISH" then BREED4 = juvenile; if ELEMENT is "INVERT" then BREED4 = juvenile; if ELEMENT is
            "REPTILE" then BREED4 = juvenile; if ELEMENT is "M_MAMMAL" then BREED4 = molting. This
            attribute is not used for HABITAT or T_MAMMAL elements.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: Y
                   Enumerated Domain Value Definition: Life-history stage or activity present
```

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Aleutian Islands Coastal Resources Inventory and
                                                                                                 Environmental Sensitivity Maps: M_MAMMAL (Marine
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: N
                          Enumerated Domain Value Definition: Life-history stage or activity not present
                          Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: -
                          Enumerated Domain Value Definition:
                                Breed category not used or not appropriate for record(s) in question
                          Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: BREED5
            Attribute Definition:
                   Life history stage or activity type, where: if ELEMENT is "FISH" then BREED5 = adults; if ELEMENT is
                   "INVERT" then BREED5 = adults; if ELEMENT is "REPTILE" then BREED5 = adults. This attribute is not
                   used for BIRD, M_MAMMAL, HABITAT, or T_MAMMAL elements.
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                          Enumerated Domain Value: Y
                         Enumerated Domain Value Definition: Life-history stage or activity present
                          Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                          Enumerated Domain Value: N
                          Enumerated Domain Value Definition: Life-history stage or activity not present
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: -
                          Enumerated Domain Value Definition:
                                Breed category not used or not appropriate for record(s) in question
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
Detailed Description:
      Entity Type:
            Entity Type Label: SOURCES
            Entity Type Definition:
                   The data table SOURCES contains the primary sources used to create the ESI data set. See the Browse_Graphic
                   section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute
                   tables in the ESI data structure.
            Entity Type Definition Source: Research Planning, Inc.
      Attribute:
             Attribute Label: SOURCE_ID
            Attribute Definition:
                   Source identifier that links records in the SOURCES data table to the items G_SOURCE and A_SOURCE in the
                   SOC DAT table, and to G SOURCE and S SOURCE in the BIORES table.
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Range Domain:
                          Range Domain Minimum: 1
                         Range Domain Maximum: N
      Attribute:
             Attribute Label: ORIGINATOR
            Attribute Definition: Author or developer of source material or data set
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                          Enumerated Domain Value: Any character
                          Enumerated Domain Value Definition: Free text
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
```

Date of source material, publication, or date of personal communication with expert source

Attribute Label: DATE_PUB

Attribute Definition Source: Research Planning, Inc.

Attribute Definition:

```
Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: Numeric
                         Enumerated Domain Value Definition: mmyyyy
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: TITLE
            Attribute Definition: Title of source material or data
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: Any character
                         Enumerated Domain Value Definition: Free text
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: DATA_FORMAT
            Attribute Definition: The format of the source material
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: Any character
                         Enumerated Domain Value Definition: Free text
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: PUBLICATION
            Attribute Definition: Additional citation information
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: Any character
                         Enumerated Domain Value Definition: Free text
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
             Attribute Label: SCALE
            Attribute Definition: Scale denominator of the source
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: integer
                         Enumerated Domain Value Definition: Any integer
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
             Attribute Label: TIME_PERIOD
            Attribute Definition:
                   Date(s) of data collection that the source material is based upon.
            Attribute Definition Source: Research Planning, Inc.
            Attribute_Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: Numeric
                         Enumerated Domain Value Definition: yyyy
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
Detailed Description:
      Entity Type:
            Entity_Type_Label: STATUS
             Entity Type Definition:
                   The data table STATUS identifies the species that are listed as either threatened or endangered by a state or
                   federal authority. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes
                   the way this table relates to other attribute tables in the ESI data structure.
             Entity Type Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: ELEMENT
            Attribute Definition: Major categories of biological data
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: BIRD
```

Enumerated Domain Value Definition: Birds

```
Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: FISH
                  Enumerated_Domain_Value_Definition: Fish
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: HABITAT
                  Enumerated Domain Value Definition: Habitats and Plants
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: INVERT
                  Enumerated Domain Value Definition: Invertebrates
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: M_MAMMAL
                  Enumerated Domain Value Definition: Marine Mammals
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: REPTILE
                  Enumerated Domain Value Definition: Reptiles and Amphibians
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: T_MAMMAL
                  Enumerated Domain Value Definition: Terrestrial Mammals
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: SPECIES_ID
      Attribute Definition:
            Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI
            species list maintained at NOAA
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Range Domain:
                  Range Domain Minimum: 1
                  Range Domain Maximum: N
Attribute:
      Attribute Label: STATE
      Attribute Definition: Two-letter state abbreviation
      Attribute Definition_Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: Any character
                  Enumerated Domain Value Definition: Two-letter state abbreviation
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: S_F
      Attribute Definition: State and Federal status.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: F
                  Enumerated Domain Value Definition: Federally listed
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute_Domain_Values:
            Enumerated Domain:
                  Enumerated Domain Value: S
                  Enumerated Domain Value Definition: State listed
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
```

Enumerated Domain Value: S/F

```
Enumerated_Domain_Value_Definition: State and federally listed Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
```

```
Attribute:
```

Attribute Label: T_E

 $\label{lem:attribute} Attribute_Definition\colon Threatened \ and \ endangered \ status.$

Attribute Definition Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated Domain:

Enumerated Domain Value: E

Enumerated Domain Value Definition: Endangered on state or federal list

Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: T

Enumerated_Domain_Value_Definition: Threatened on state or federal list

Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service

Attribute:

Attribute Label: DATE_PUB

Attribute Definition:

Publication date of source material used to assign state and federal status values for each species, if used.

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: Numeric

Enumerated Domain Value Definition: mmyyyy

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute_Label: EL_SPE

Attribute Definition:

Concatenation of ELEMENT and SPECIES_ID. This item links the STATUS data table to the BIORES and SPECIES data tables.

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated_Domain:

Enumerated_Domain_Value: E#####

Enumerated Domain Value Definition:

Where E is the first character of ELEMENT and the next five characters are SPECIES_ID (eg.

ELEMENT = 'BIRD' and SPECIES_ID = 1; EL_SPE = 'B00001').

Enumerated Domain Value Definition Source: Research Planning, Inc.

Distribution Information:

Distributor:

Contact Information:

Contact Person Primary:

Contact_Person: John Kaperick

Contact Organization: NOAA, Office of Response and Restoration

Contact Address:

Address_Type: Physical Address Address: 7600 Sand Point Way, N.E.

City: Seattle

State or Province: Washington

Postal Code: 98115-6349

Contact Voice Telephone: (206) 526-6400

Contact Facsimile Telephone: (206) 526-6329

Resource Description: ESI Atlas for the Aleutian Islands

Distribution Liability:

Although these data have been processed successfully on a computer system at the National Oceanic and Atmospheric Administration, no warranty, expressed or implied, is made by NOAA regarding the utility of the data on any other system, nor shall the act of distribution constitute any such warranty. NOAA warrants the delivery of this product in computer-readable format, and will offer a replacement copy of the product when the product is determined unreadable by computer-input peripherals, or when the physical medium is delivered in damaged condition.

Custom_Order_Process:

Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to a wider community of GIS/mapping users. Distribution formats include ARC export, MOSS and Shape files, and MARPLOT map folders. An ArcView ESI project and ESI_Viewer product are also included on the distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical

Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

Metadata Reference Information: Metadata Date: 200205 Metadata_Review Date: 200205 Metadata_Contact: Contact Information: Contact Person Primary: Contact Person: Jill Petersen Contact Organization: NOAA, Office of Response and Restoration Contact_Position: GIS Manager Contact Address: Address Type: Physical Address Address: 7600 Sand Point Way, N.E. City: Seattle State_or_Province: Washington Postal Code: 98115-6349 Contact Voice Telephone: (206) 526-6944 Contact_Facsimile_Telephone: (206) 526-6329 Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov Metadata Standard Name: Content Standards for Digital Geospatial Metadata Metadata_Standard_Version: FGDC-STD-001-1998

Generated by mp version 2.7.23 on Thu May 16 15:38:20 2002

Aleutian Islands Coastal Resources Inventory and Environmental Sensitivity Maps: M_MAMPT (Marine Mammal Points)

Metadata also available as - [Parseable text] - [SGML]

Metadata:

- Identification Information
- Data Quality Information
- Spatial Data Organization Information
- Spatial Reference Information
- Entity and Attribute Information
- Distribution Information
- Metadata Reference Information

Identification Information:

Citation:

Citation Information:

Originator:

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Prince William Sound Oil Spill Recovery Institute; Aleutians West Coastal Resource Service Area (CRSA); Aleutians East Borough; Alaska Chadux Corporation; United States Coast Guard; and National Fish & Wildlife Foundation.

Publication Date: 200205

Title:

Aleutian Islands Coastal Resources Inventory and Environmental Sensitivity Maps: M_MAMPT (Marine Mammal Points)

Edition: First

Geospatial Data Presentation Form: Digital vector data

Series Information:

Series Name: None

Issue Identification: Aleutian Islands

Publication Information:

Publication Place: Seattle, Washington

Publisher:

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington

Other_Citation_Details:

Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Prince William Sound Oil Spill Recovery Institute; Aleutians West Coastal Resource Service Area (CRSA); Aleutians East Borough; Alaska Chadux Corporation; United States Coast Guard; and National Fish & Wildlife Foundation.

Description:

Abstract

This data set contains biological resource data for seals and sea lions in the Aleutian Islands, Alaska. Points in this data set represent locations of haulout and rookery sites. Species-specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for Aleutians East Borough and Aleutians West Coastal Resource Service Area (CRSA). These data identify the marine and coastal environments and wildlife. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources. See also the M_MAMMAL (Marine Mammal Polygons) data layer, part of the larger Aleutians East/Aleutians West ESI database, for sea otter and walrus distribution information.

Purpose:

The ESI data were collected, mapped, and digitized to provide environmental data for oil spill planning and response. The Clean Water Act with amendments by the Oil Pollution Act of 1990 requires response plans for immediate and effective protection of sensitive resources.

Time Period of Content:

Time Period Information:

Range of Dates/Times:

Beginning_Date: 2000 Ending_Date: 2001

Currentness_Reference:

The biological data were compiled during 2000-2001. The currentness dates for these data range from 1997 to 2001 and are documented in the Source_Information section.

Status:

Progress: Complete

Maintenance and Update Frequency: None Scheduled

Spatial Domain:

Bounding Coordinates:

West_Bounding_Coordinate: 172.42000 East_Bounding_Coordinate: -158.81002 North_Bounding_Coordinate: 58.133120 South_Bounding_Coordinate: 48.351629

Keywords:

Theme:

Theme Keyword Thesaurus: None

Theme Keyword: ESI

Theme_Keyword: Sensitivity maps Theme_Keyword: Coastal resources Theme Keyword: Oil spill planning

Theme Keyword: Coastal Zone Management

Theme Keyword: Wildlife

Theme Keyword: Marine Mammal

Place:

Place_Keyword_Thesaurus: None Place Keyword: Aleutian Islands

Access Constraints: None

Use Constraints:

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

Browse Graphic:

Browse_Graphic_File_Name: datafig.jpg Browse Graphic File Description:

Relationships between spatial data layers and attribute data tables for the Aleutian Islands ESI data.

Browse Graphic File Type: JPEG

Data Set Credit:

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Prince William Sound Oil Spill Recovery Institute; Aleutians West Coastal Resource Service Area (CRSA); Aleutians East Borough; Alaska Chadux Corporation; United States Coast Guard; and National Fish & Wildlife Foundation.

Native Data Set Environment:

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.0.2) and ORACLE(r) RDBMS (version 8.0.5.0.0). The hardware configuration is Hewlett Packard workstations (models 715/50 and 712/80i) with UNIX operating system (HP-UX Release A.10.20), and PC's with Windows Operating System (NT4.0/2000). The Spatial_Data_Organization Information section refers only to the source files in the ARC export format. The following files are included in that data set: birds.e00, bio_lut.e00, biofile.e00, biores.e00, breed_e00, breed_dt.e00, esi.e00, faults.e00, fish.e00, fishl.e00, geo.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, m_mampt.e00, mgt.e00, nests.e00, seasonal.e00, soc_dat.e00, soc_lut.e00, socecon.e00, sources.e00, species.e00, status.e00, volcanos.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biofile, biores, breed, breed dt, seasonal, soc dat, soc lut, socecon, sources, species, and status.

Data Quality Information:

Attribute Accuracy:

Attribute Accuracy_Report:

A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.

Logical Consistency Report:

A multi-stage error checking process, described in the above Attribute_Accuracy_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency

checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary node, etc.), and ORACLE(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks. In the process of checking for topological and database consistencies, new ID's and RARNUM's or HUNUM's are also generated. The new ID's are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon, a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "resource at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

Completeness Report:

These data are from digital data on haulout and rookery sites. Refer to the M_MAMMAL (Marine Mammal Polygons) data layer for additional marine mammal distribution information. These data do not necessarily represent all marine mammal occurrences in the Aleutian Islands, Alaska. The following species are included in this data set (Species_ID, Common Name, Scientific Name, if applicable): 1, Steller (Northern) sea lion, Eumetopias jubatus; 2, Harbor seal, Phoca vitulina; 3, Northern fur seal, Callorhinus ursinus.

Positional Accuracy:

Horizontal Positional Accuracy:

Horizontal Positional Accuracy Report:

This biological data set was developed from pre-existing digital sources and reflects the positional accuracy of these original data. See the Lineage and Process_Description sections for more information on the original data source and how these data were integrated or manipulated to create the final data set. Note that biological resource data by their very nature are considered "fuzzy", and this should be understood when considering the positional accuracy of vector digital objects representing these resources.

Lineage:

Source Information:

Source Citation:

Citation Information:

Originator: John Sease, National Marine Fisheries Service

Publication Date: Unpublished material

Title: Stellar Sea Lion Haulouts

Geospatial Data Presentation Form: Digital table

Type of Source Media: Electronic mail service

Source_Time_Period_of_Content:

Time_Period_Information:

Single Date/Time:

Calendar Date: 2000

Source Currentness Reference: Date of study

Source Citation Abbreviation: None

Source Contribution: Marine Mammal Information

Source_Information:

Source Citation:

Citation Information:

Originator: U.S. Fish and Wildlife Service - Walrus

Publication Date: Unpublished material

Title: Walrus Haulout and Concentration Areas

Geospatial Data Presentation Form: Hardcopy Map

Source Scale Denominator: 250000

Type of Source Media: Paper

Source Time Period of Content:

Time Period Information:

Single Date/Time:

Calendar_Date: 2000

Source Currentness Reference: Date of study

Source Citation Abbreviation: None

Source Contribution: Marine Mammal Information

Source Information:

Source Citation:

Citation Information:

Originator: David Withrow

Publication Date: Unpublished material

Title: Harbor Seal Haulouts

Geospatial_Data_Presentation_Form: Digital table

Type of Source Media: Electronic mail service

Source Time Period of Content:

 \overline{T} ime \overline{P} eriod \overline{I} nformation:

Single Date/Time:

Calendar Date: 2000

Source Currentness Reference: Date of study

Source Citation Abbreviation: None

Source Contribution: Marine Mammal Information

Source_Information:

Source Citation:

Citation Information:

Originator: Dave Withrow

Publication Date: Unpublished material

Title: Personal Communication

Geospatial Data Presentation Form: Personal Communication

Type of Source Media: Expert knowledge

Source Time Period of Content:

Time Period Information:

Single Date/Time:

-Calendar Date: 1997

Source Currentness Reference: Date of Communication

Source Citation Abbreviation: None

Source Contribution: Marine Mammal Information

Process Step:

Process Description:

The data source used to depict marine mammal haulout locations was the National Marine Fisheries Service (NMFS) marine mammal lab in Seattle, Washington. The digital positional data were used exactly as provided, and the attribute data were converted to a format compatible with the ESI data format. Following the data compilation phase, several sets of completed maps were sent out to the resource agencies for review, and edits were made based on recommendations by the resource experts. Concentration information was numerical counts of individuals, where available, and unknown otherwise. In many cases, concentration information was provided by resource experts.

Process_Date: 200111
Process Contact:

Contact Information:

Contact Organization Primary:

Contact Organization: NOAA, Office of Response and Restoration

Contact Person: Jill Petersen

Contact Address:

Address_Type: Physical address Address: 7600 Sand Point Way, N.E.

City: Seattle

State_or_Province: Washington Postal_Code: 98115-6349

Contact_Voice_Telephone: (206) 526-6944 Contact Facsimile Telephone: (206) 526-6329

Contact Electronic Mail Address: Jill.Petersen@noaa.gov

Spatial Data Organization Information:

Direct_Spatial_Reference_Method: Vector Point and Vector Object Information:

SDTS Terms Description:

SDTS_Point_and_Vector_Object_Type: Entity Point

Point_and_Vector_Object Count: 623

Spatial_Reference_Information:

Horizontal Coordinate System Definition:

Geographic:

Latitude_Resolution: 0.00005 Longitude Resolution: 0.00005

Geographic Coordinate Units: Decimal degrees

Geodetic Model:

Horizontal_Datum_Name: North American Datum of 1927

Ellipsoid_Name: Clark 1866 Semi-major Axis: 6378206.4

Denominator of Flattening Ratio: 294.978698

Entity and Attribute Information:

Overview Description:

Entity and Attribute Overview:

In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, M_MAMPT) is linked to the Biological Resources table (BIORES) using the unique ID and the lookup table BIO_LUT, or it can be linked directly using RARNUM. The ID is a unique combination of the atlas number (for the Aleutian Islands atlas, the number is 72) an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described below in detail. See the Browse Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure. Due to the complexity of the relational database model, the data items are also post-processed into a flat file format. This table, called BIOFILE, may be used in place of the relational files described below to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN_SPEC, S_F, T_E, NHP, DATE_PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G SOURCE, S SOURCE, and BREED. All of these items are the same as their counterparts in the individual data tables described below, except the BREED1-BREED5 and BREED items. BREED is a newly generated variable used to link to the BREED DT data table, a modified, more compact version of the relational BREED data table. BREED1-BREED5 give a text summary of when each life stage occurs within the associated map object. The life stages referred to are the same as those listed in the Detailed_Description of the BREED data table. The link to the BIOFILE may be made through the BIO_LUT, using ID to link to RARNUM, or BIOFILE may be linked directly to the RARNUM in each of the geographic layer's attribute data tables. As mentioned, BREED DT is an auxiliary support data table to the flat file structure, which allows the user to do searches based on month for seasonal breeding activities. The link from the flat file to BREED DT is the BREED item. A second supporting data table is SOURCES. This is the same as the source file described above, and the link from the flat file is both G SOURCE and S SOURCE. It should be noted that although the flat file eases data query, it is not a normalized database structure, and actual updates performed by the states and other responsible agencies should be done using the relational data tables. The entity-relationship diagram describing relationships between attribute tables in the ESI data structure does NOT include the BIOFILE data table, and this data table is NOT described in detail below.

Detailed Description:

Entity Type:

Entity_Type_Label: M_MAMPT.PAT

Entity Type Definition:

The MAMPT.PAT table contains attribute information for the vector points representing marine mammal haulout sites. Note that all attribute information is stored in a series of relational files, described below. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.

Entity Type Definition Source: Research Planning, Inc.

Attribute:

Attribute_Label: ID

Attribute Definition:

An identifier that links vector objects in the biology data layers to records in the BIO_LUT data table. ID is a concatenation of atlas number (72), element number (34; 30 because it is a point feature, plus 4, the element value for M_MAMMAL), and record number.

Attribute Definition Source: NOAA

Attribute Domain Values:

Range_Domain:

Range Domain Minimum: 723400001 Range Domain Maximum: 723400623

Attribute:

Attribute Label: RARNUM

Attribute Definition:

An identifier that links directly to the BIORES table or the flat format BIOFILE table.

Attribute_Definition_Source: NOAA

Attribute Domain Values:

Range_Domain:

Range_Domain_Minimum: 72000599
Range_Domain_Maximum: 72000612

Detailed Description:

Entity Type:

Entity_Type_Label: BIO_LUT

Entity_Type Definition:

The data table BIO_LUT is a lookup table that contains items necessary for linking vector objects in the biological data layers with the BIORES data table. Note that all attribute information is stored in a series of

relational files, described below. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

Entity Type Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: RARNUM

Attribute Definition:

An identifier that links records in the BIO_LUT data table to records in the BIORES data table or the flat format BIOFILE data table. RARNUM values of 0 are holes in the polygons and do not contain information.

Attribute_Definition_Source: NOAA

Attribute Domain Values:

Range Domain:

Range_Domain_Minimum: 72000001 Range Domain Maximum: 72000615

Attribute:

Attribute_Label: ID Attribute Definition:

An identifier that links vector objects in the biology data layers to records in the BIO_LUT data table. ID is a concatenation of atlas number (72), element number (34; 30 because it is a point feature, plus 4, the element value for M_MAMMAL), and record number. ID values of 9999 are holes in polygons and do not contain information.

Attribute Definition Source: NOAA

Attribute Domain Values:

Range Domain:

Range_Domain_Minimum: 720100002 Range_Domain_Maximum: 723400623

Detailed Description:

Entity_Type:

Entity_Type_Label: BIORES
Entity Type Definition:

The data table BIORES contains both biological attribute data and items necessary for linking vector objects in the biological data layers via the BIO_LUT data table to other associated data tables. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

Entity Type Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: RARNUM

Attribute Definition:

An identifier that links records in the BIORES data table to records in the BIO_LUT data table or the flat format BIOFILE data table.

Attribute Definition Source: NOAA

Attribute_Domain_Values:

Range Domain:

Range_Domain_Minimum: 072000001 Range_Domain_Maximum: 072000615

Attribute:

Attribute_Label: SPECIES_ID

Attribute Definition:

Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA.

Attribute_Definition_Source: Research Planning, Inc.

Attribute Domain Values:

Range_Domain:

Range_Domain_Minimum: 1
Range_Domain_Maximum: N

Attribute:

Attribute_Label: CONC

Attribute_Definition:

The field CONC refers to a range of the number of adult individuals for harbor seals and sea lions present at a particular haulout site. The ranges included were "0-49", "50-99", "100-199", "200-299", and ">= 300". These values are based on a 5-year average count for the years 1994-1999. For the Northern fur seal, the number of individuals counted as of the last survey ("13751") is included.

Attribute_Definition_Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character Enumerated Domain Value Definition: Free text

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

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Attribute Label: SEASON ID
      Attribute Definition:
            Numeric identifier for the unique monthly presence and life history characteristics of each species at a given
            location.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Range Domain:
                  Range Domain Minimum: 1
                  Range Domain Maximum: N
Attribute:
      Attribute Label: G SOURCE
      Attribute Definition:
            Geographic source identifier that links records in the BIORES data table to records in the SOURCES data table.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Range Domain:
                  Range Domain Minimum: 1
                  Range Domain Maximum: N
Attribute:
      Attribute Label: S_SOURCE
      Attribute Definition:
            Seasonality source identifier that links records in the BIORES data table to records in the SOURCES data table.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Range Domain:
                  Range Domain Minimum: 1
                  Range Domain Maximum: N
Attribute:
      Attribute Label: ELEMENT
      Attribute Definition: Major categories of biological data
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: BIRD
                  Enumerated Domain Value Definition: Birds
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: FISH
                  Enumerated Domain Value Definition: Fish
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: HABITAT
                  Enumerated Domain Value Definition: Habitats and plants
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: INVERT
                  Enumerated Domain Value Definition: Invertebrates
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: M_MAMMAL
                  Enumerated Domain Value Definition: Marine mammals
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: REPTILE
                  Enumerated Domain Value Definition: Reptiles and Amphibians
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: T_MAMMAL
                  Enumerated Domain Value Definition: Terrestrial mammals
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
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Attribute_Label: EL_SPE
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Attribute Definition:

Concatenation of ELEMENT and SPECIES_ID. This item links records in the BIORES data table to records in the SPECIES and STATUS data tables.

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated_Domain_Value: E#####
Enumerated_Domain_Value Definition:

Where E is the first character of ELEMENT and the next five characters are SPECIES_ID (eg. ELEMENT = 'BIRD' and SPECIES_ID = 1; EL_SPE = 'B00001').

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: EL_SPE_SEA

Attribute Definition:

Concatenation of ELEMENT, SPECIES_ID, and SEASON_ID. This item links records in the BIORES data table to records in the SEASONAL and BREED data tables.

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated_Domain_Value: E######

Enumerated Domain Value Definition:

Where E is the first character of ELEMENT, the next five characters are SPECIES_ID, and the last two characters are SEASON_ID (eg. ELEMENT = 'BIRD', SPECIES_ID = 1 and SEASON_ID = 1; EL_SPE_SEA = 'B0000101').

Enumerated Domain Value Definition Source: Research Planning, Inc.

Detailed Description:

 $Entity_Type:$

Entity_Type_Label: SPECIES

Entity Type Definition:

The data table SPECIES identifies all species in the ESI data set. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure. Refer to the Completeness_Report for a list of layer-specific species.

Entity Type Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: SPECIES ID

Attribute Definition:

Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA.

Attribute Definition Source: Research Planning, Inc.

Attribute_Domain_Values:

Range Domain:

Attribute:

Attribute Label: NAME

Attribute Definition: Species common name

Attribute_Definition_Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: Species common name for the entire ESI data set

Enumerated Domain Value Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute Label: GEN_SPEC

Attribute Definition: Species scientific name

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: Species scientific name for the entire ESI data set.

Enumerated Domain Value Definition: Free text

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: ELEMENT

Attribute Definition: Major categories of biological data Attribute Definition Source: Research Planning, Inc.

Attribute_Domain_Values:

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Enumerated_Domain:
Enumerated_Domain
```

Enumerated_Domain_Value: BIRD

Enumerated Domain Value Definition: Birds

Enumerated Domain Value Definition Source: Research Planning, Inc.

 $Attribute_Domain_Values:$

Enumerated Domain:

Enumerated Domain Value: FISH

Enumerated Domain Value Definition: Fish

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated Domain:

Enumerated_Domain Value: HABITAT

Enumerated_Domain_Value_Definition: Habitats and plants

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated Domain:

Enumerated_Domain_Value: INVERT

Enumerated Domain Value Definition: Invertebrates

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: M_MAMMAL

Enumerated Domain Value Definition: Marine Mammals

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated_Domain_Value: REPTILE

Enumerated Domain Value Definition: Reptiles and Amphibians

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: T_MAMMAL

Enumerated_Domain_Value_Definition: Terrestrial Mammals

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: SUBELEMENT

Attribute_Definition: Element subgroup delineating a logical grouping of species.

Attribute Definition Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated Domain:

Enumerated Domain Value: alcid

Enumerated Domain Value Definition: Alcid

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated_Domain_Value: bivalve

Enumerated Domain Value Definition: Bivalve

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: crab

Enumerated Domain Value Definition: Crab

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: diadromous

Enumerated Domain Value Definition: Diadromous fish

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: diving

Enumerated Domain Value Definition: Diving bird

Enumerated Domain_Value_Definition_Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: e_nursery

Enumerated Domain Value Definition: Estuarine nursery fish

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Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: gull_tern
                  Enumerated Domain Value Definition: Gull or tern
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: m_benthic
                  Enumerated Domain Value Definition: Marine benthic fish
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: m_pelagic
                  Enumerated Domain Value Definition: Marine pelagic fish
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: pelagic
                  Enumerated Domain Value Definition: Pelagic bird
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: pinniped
                  Enumerated Domain Value Definition: Pinniped
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: sav
                  Enumerated Domain Value Definition: Submersed aquatic vegetation
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: shorebird
                  Enumerated Domain Value Definition: Shorebird
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: sea_otter
                  Enumerated Domain Value Definition: Otter
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: waterfowl
                  Enumerated Domain Value Definition: Waterfowl
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: NHP
      Attribute Definition: Natural Heritage Program global ranking
      Attribute Definition Source: Network of Natural Heritage Program
      Attribute Domain Values:
            Codeset Domain:
                  Codeset Name: NHP Global Conservation Status Rank
                  Codeset Source: Natural Heritage Program
Attribute:
      Attribute Label: DATE_PUB
      Attribute Definition: Date of NHP listing
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: 0
                  Enumerated Domain Value Definition: Not ranked
                  Enumerated Domain_Value_Definition_Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: Numeric
                  Enumerated Domain Value Definition: mmyyyy
```

Enumerated Domain Value Definition Source: Research Planning, Inc.

```
Attribute:
```

Attribute Label: EL_SPE

Attribute Definition:

Concatenation of ELEMENT and SPECIES_ID. This item links records in the SPECIES data table to records in the BIORES and STATUS data tables.

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated_Domain_Value: E#####

Enumerated Domain Value Definition:

Where E is the first character of ELEMENT and the next five characters are SPECIES_ID (eg. ELEMENT = 'BIRD' and SPECIES_ID = 1; EL_SPE = 'B00001').

Enumerated Domain Value Definition Source: Research Planning, Inc.

Detailed Description:

Entity Type:

Entity Type Label: SEASONAL

Entity Type Definition:

The data table SEASONAL contains information on the seasonal presence of each species associated with each spatial vector object. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

Entity Type Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: ELEMENT

Attribute_Definition: Major categories of biological data

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: BIRD

Enumerated_Domain_Value_Definition: Birds

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: FISH

Enumerated Domain Value Definition: Fish

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated_Domain:

Enumerated Domain Value: HABITAT

Enumerated_Domain_Value_Definition: Habitats and plants

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: INVERT

Enumerated_Domain_Value_Definition: Invertebrates

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: M_MAMMAL

Enumerated Domain Value Definition: Marine Mammals

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: REPTILE

Enumerated_Domain_Value_Definition: Reptiles and Amphibians

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated Domain:

Enumerated_Domain_Value: T_MAMMAL

Enumerated_Domain_Value_Definition: Terrestrial Mammals

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: SPECIES_ID

 $Attribute_Definition:$

Numeric identifier for each species that is unique within each element and refers to a nationwide ESI species list maintained at NOAA.

Attribute Definition Source: Research Planning, Inc.

```
Attribute Domain Values:
            Range Domain:
                  Range Domain Minimum: 1
                  Range Domain Maximum: N
Attribute:
      Attribute Label: SEASON_ID
      Attribute Definition:
            Numeric identifier for the unique monthly presence and life history characteristics of each species at a given
            location.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Range Domain:
                  Range Domain Minimum: 1
                  Range Domain Maximum: N
Attribute:
      Attribute Label: JAN
      Attribute Definition: January
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in January
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: FEB
      Attribute Definition: February
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in February
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: MAR
      Attribute Definition: March
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: X
                   Enumerated_Domain_Value_Definition: Present in March
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: APR
      Attribute Definition: April
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in April
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: MAY
      Attribute Definition: May
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: X
                   Enumerated Domain Value Definition: Present in May
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: JUN
      Attribute Definition: June
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: X
```

Enumerated Domain Value Definition: Present in June

```
Aleutian Islands Coastal Resources Inventory and
                                                                                     Environmental Sensitivity Maps: M_MAMPT (Marine
             Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Label: JUL
Attribute Definition: July
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
             Enumerated Domain Value: X
             Enumerated Domain Value Definition: Present in July
             Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Label: AUG
Attribute Definition: August
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
             Enumerated Domain Value: X
             Enumerated Domain Value Definition: Present in August
             Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Label: SEP
Attribute Definition: September
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
             Enumerated Domain Value: X
             Enumerated_Domain_Value_Definition: Present in September
             Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Label: OCT
Attribute Definition: October
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
             Enumerated Domain Value: X
             Enumerated Domain Value Definition: Present in October
             Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Label: NOV
Attribute Definition: November
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
             Enumerated Domain Value: X
             Enumerated Domain Value Definition: Present in November
             Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Definition: December
```

Attribute:

Attribute:

Attribute:

Attribute:

Attribute:

Attribute:

Attribute Label: DEC

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: X

Enumerated Domain Value Definition: Present in December

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: EL_SPE_SEA

Attribute Definition:

Concatenation of ELEMENT, SPECIES_ID, and SEASON_ID. This item links records in the SEASONAL data table to records in the BIORES and BREED data tables.

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: E######

Enumerated Domain Value Definition:

Where E is the first character of ELEMENT, the next five characters are SPECIES_ID, and the last two characters are SEASON_ID (eg. ELEMENT = 'BIRD', SPECIES_ID = 1 and

```
SEASON_ID = 1; EL_SPE_SEA = 'B0000101').
```

Enumerated Domain Value Definition Source: Research Planning, Inc.

```
Detailed Description:
```

Entity_Type:

Entity Type Label: BREED

Entity Type Definition:

The data table BREED identifies the monthly presence of certain life-history stages or activities for each species at a given location.

Entity_Type_Definition_Source: Research Planning, Inc.

Attribute:

Attribute Label: EL_SPE_SEA

Attribute Definition:

Concatenation of ELEMENT, SPECIES_ID, and SEASON_ID. This item links records in the BREED data table to records in the BIORES and SEASONAL data tables.

Attribute_Definition_Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: E######

Enumerated Domain Value Definition:

Where E is the first character of ELEMENT, the next five characters are SPECIES_ID, and the last two characters are SEASON_ID (eg. ELEMENT = 'BIRD', SPECIES_ID = 1 and SEASON_ID = 1; EL_SPE_SEA = 'B0000101').

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute Label: MONTH

Attribute Definition:

Two-digit calendar month. Each life history stage or activity type for a particular species can have up to 12 records to account for each month of the year.

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Range_Domain:

Range_Domain_Minimum: 1
Range_Domain_Maximum: 12

Attribute:

Attribute Label: BREED1

 $Attribute_Definition:$

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED1 = nesting; if ELEMENT is "FISH" then BREED1 = spawning; if ELEMENT is "INVERT" then BREED1 = spawning/mating; if ELEMENT is "INVERT" then BREED1 = spawning/mating; if

ELEMENT is "REPTILE" then BREED1 = nesting; if ELEMENT is "M_MAMMAL" then BREED1 = mating. This attribute is not used for HABITAT or T_MAMMAL elements.

Attribute_Definition_Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated_Domain_Value: Y

Enumerated Domain Value Definition: Life-history stage or activity present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated_Domain:

Enumerated_Domain_Value: N

Enumerated Domain Value Definition: Life-history stage or activity not present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated_Domain:

Enumerated Domain Value: -

Enumerated Domain Value Definition:

Breed category not used or not appropriate for record(s) in question

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute Label: BREED2

Attribute Definition:

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED2 = laying; if ELEMENT is "FISH" then BREED2 = eggs; if ELEMENT is "INVERT" then BREED2 = eggs; if ELEMENT is "REPTILE" then BREED2 = hatching; if ELEMENT is "M_MAMMAL" then BREED2 = calving. This attribute is not used for HABITAT or T_MAMMAL elements.

Attribute_Definition_Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated_Domain:

Enumerated Domain Value: Y

```
Aleutian Islands Coastal Resources Inventory and
                                                                                         Environmental Sensitivity Maps: M_MAMPT (Marine
             Enumerated Domain Value Definition: Life-history stage or activity present
             Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
             Enumerated Domain Value: N
             Enumerated Domain Value Definition: Life-history stage or activity not present
             Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
             Enumerated Domain Value: -
             Enumerated Domain Value Definition:
                    Breed category not used or not appropriate for record(s) in question
             Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Label: BREED3
Attribute Definition:
      Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED3 = hatching; if ELEMENT is
      "FISH" then BREED3 = larvae; if ELEMENT is "INVERT" then BREED3 = larvae; if ELEMENT is "REPTILE" then BREED3 = internesting; if ELEMENT is "M_MAMMAL" then BREED3 = pupping. This
      attribute is not used for HABITAT or T_MAMMAL elements.
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
             Enumerated Domain Value: Y
             Enumerated Domain Value Definition: Life-history stage or activity present
             Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
             Enumerated Domain Value: N
             Enumerated Domain Value Definition: Life-history stage or activity not present
             Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
             Enumerated Domain Value: -
             Enumerated Domain Value Definition:
                    Breed category not used or not appropriate for record(s) in question
             Enumerated Domain Value Definition Source: Research Planning, Inc.
      Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED4 = fledging; if ELEMENT is
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
             Enumerated Domain Value: Y
             Enumerated Domain Value Definition: Life-history stage or activity present
             Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Domain Values:
```

Attribute:

Attribute:

Attribute Label: BREED4 Attribute Definition:

> "FISH" then BREED4 = juvenile; if ELEMENT is "INVERT" then BREED4 = juvenile; if ELEMENT is "REPTILE" then BREED4 = juvenile; if ELEMENT is "M_MAMMAL" then BREED4 = molting. This attribute is not used for HABITAT or T_MAMMAL elements.

Enumerated Domain:

Enumerated Domain Value: N

Enumerated Domain Value Definition: Life-history stage or activity not present

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: -

Enumerated Domain Value Definition:

Breed category not used or not appropriate for record(s) in question

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: BREED5 Attribute_Definition:

Life history stage or activity type, where: if ELEMENT is "FISH" then BREED5 = adults; if ELEMENT is "INVERT" then BREED5 = adults; if ELEMENT is "REPTILE" then BREED5 = adults. This attribute is not used for BIRD, M_MAMMAL, HABITAT, or T_MAMMAL elements.

```
Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: Y
                         Enumerated Domain Value Definition: Life-history stage or activity present
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: N
                         Enumerated Domain Value Definition: Life-history stage or activity not present
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: -
                         Enumerated Domain Value Definition:
                                Breed category not used or not appropriate for record(s) in question
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
Detailed Description:
      Entity Type:
            Entity Type Label: SOURCES
            Entity Type Definition:
                   The data table SOURCES contains the primary sources used to create the ESI data set. See the Browse Graphic
                   section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute
                   tables in the ESI data structure.
            Entity Type Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: SOURCE_ID
            Attribute Definition:
                   Source identifier that links records in the SOURCES data table to the items G SOURCE and A SOURCE in the
                   SOC_DAT table, and to G_SOURCE and S_SOURCE in the BIORES table.
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Range Domain:
                         Range Domain Minimum: 1
                         Range Domain Maximum: N
      Attribute:
            Attribute Label: ORIGINATOR
            Attribute Definition: Author or developer of source material or data set
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: Any character
                         Enumerated Domain Value Definition: Free text
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: DATE_PUB
            Attribute Definition:
                   Date of source material, publication, or date of personal communication with expert source
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: Numeric
                         Enumerated Domain Value Definition: mmyyyy
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: TITLE
            Attribute Definition: Title of source material or data
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: Any character
                         Enumerated Domain Value Definition: Free text
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: DATA FORMAT
            Attribute Definition: The format of the source material
            Attribute Definition Source: Research Planning, Inc.
```

```
Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: Any character
                         Enumerated Domain Value Definition: Free text
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: PUBLICATION
            Attribute Definition: Additional citation information
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: Any character
                         Enumerated Domain Value Definition: Free text
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: SCALE
            Attribute Definition: Scale denominator of the source
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: integer
                         Enumerated Domain Value Definition: Any integer
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: TIME_PERIOD
            Attribute Definition:
                   Date(s) of data collection that the source material is based upon.
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: Numeric
                         Enumerated Domain Value Definition: yyyy
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
Detailed Description:
      Entity Type:
             Entity_Type_Label: STATUS
            Entity Type Definition:
                   The data table STATUS identifies the species that are listed as either threatened or endangered by a state or
                   federal authority. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes
                   the way this table relates to other attribute tables in the ESI data structure.
             Entity Type Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: ELEMENT
            Attribute Definition: Major categories of biological data
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: BIRD
                         Enumerated Domain Value Definition: Birds
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute\_Domain\_Values:
                   Enumerated Domain:
                         Enumerated Domain Value: FISH
                         Enumerated Domain Value Definition: Fish
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: HABITAT
                         Enumerated Domain Value Definition: Habitats and Plants
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute_Domain_Values:
                   Enumerated Domain:
                         Enumerated Domain Value: INVERT
                         Enumerated Domain Value Definition: Invertebrates
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
```

```
Enumerated Domain Value Definition: Marine Mammals
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: REPTILE
                   Enumerated Domain Value Definition: Reptiles and Amphibians
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: T MAMMAL
                   Enumerated Domain Value Definition: Terrestrial Mammals
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: SPECIES ID
      Attribute Definition:
            Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI
            species list maintained at NOAA
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Range Domain:
                  Range Domain Minimum: 1
                  Range Domain Maximum: N
Attribute:
      Attribute Label: STATE
      Attribute Definition: Two-letter state abbreviation
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: Any character
                   Enumerated Domain Value Definition: Two-letter state abbreviation
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: S F
      Attribute Definition: State and Federal status.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: F
                  Enumerated_Domain_Value_Definition: Federally listed
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: S
                   Enumerated Domain Value Definition: State listed
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: S/F
                   Enumerated Domain Value Definition: State and federally listed
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: T_E
      Attribute Definition: Threatened and endangered status.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: E
                  Enumerated Domain Value Definition: Endangered on state or federal list
                   Enumerated Domain Value Definition Source: U.S. Fish and Wildlife Service
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: T
                   Enumerated Domain Value Definition: Threatened on state or federal list
                  Enumerated Domain Value Definition Source: U.S. Fish and Wildlife Service
Attribute:
```

Attribute Label: DATE_PUB

Enumerated Domain Value: M MAMMAL

Attribute Definition:

Publication date of source material used to assign state and federal status values for each species, if used.

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: Numeric

Enumerated_Domain_Value_Definition: mmyyyy

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute_Label: EL_SPE Attribute_Definition:

Concatenation of ELEMENT and SPECIES_ID. This item links the STATUS data table to the BIORES and

SPECIES data tables.

Attribute_Definition_Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated_Domain_Value: E#####
Enumerated_Domain_Value Definition:

Where E is the first character of ELEMENT and the next five characters are SPECIES_ID (eg.

ELEMENT = 'BIRD' and SPECIES_ID = 1; EL_SPE = 'B00001').

Enumerated Domain Value Definition Source: Research Planning, Inc.

Distribution Information:

Distributor:

Contact Information:

Contact_Person_Primary:

Contact Person: John Kaperick

Contact Organization: NOAA, Office of Response and Restoration

Contact Address:

Address_Type: Physical Address Address: 7600 Sand Point Way, N.E.

City: Seattle

State_or_Province: Washington Postal Code: 98115-6349

Contact_Voice_Telephone: (206) 526-6400 Contact_Facsimile_Telephone: (206) 526-6329

Resource Description: ESI Atlas for the Aleutian Islands

Distribution Liability:

Although these data have been processed successfully on a computer system at the National Oceanic and Atmospheric Administration, no warranty, expressed or implied, is made by NOAA regarding the utility of the data on any other system, nor shall the act of distribution constitute any such warranty. NOAA warrants the delivery of this product in computer-readable format, and will offer a replacement copy of the product when the product is determined unreadable by computer-input peripherals, or when the physical medium is delivered in damaged condition.

Custom_Order_Process:

Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to a wider community of GIS/mapping users. Distribution formats include ARC export, MOSS and Shape files, and MARPLOT map folders. An ArcView ESI project and ESI_Viewer product are also included on the distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

Metadata Reference Information:

Metadata Date: 200205

Metadata Review Date: 200205

Metadata Contact:

Contact Information:

Contact Person Primary:

Contact Person: Jill Petersen

Contact_Organization: NOAA, Office of Response and Restoration

Contact Position: GIS Manager

Contact Address:

Address_Type: Physical Address Address: 7600 Sand Point Way, N.E.

City: Seattle

State_or_Province: Washington *Postal_Code:* 98115-6349

Contact_Voice_Telephone: (206) 526-6944

Contact_Voice_Tetephone: (200) 526-6344

Contact_Facsimile_Telephone: (206) 526-6329

Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov

Metadata_Standard_Name: Content Standards for Digital Geospatial Metadata

Metadata_Standard_Version: FGDC-STD-001-1998

Generated by mp version 2.7.23 on Thu May 16 15:41:03 2002

Aleutian Islands Coastal Resources Inventory and Environmental Sensitivity Maps: HABITATS (Habitat Polygons)

Metadata also available as - [Parseable text] - [SGML]

Metadata:

- Identification Information
- Data Quality Information
- Spatial Data Organization Information
- Spatial Reference Information
- Entity and Attribute Information
- <u>Distribution Information</u>
- Metadata Reference Information

Identification Information:

Citation:

Citation Information:

Originator:

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Prince William Sound Oil Spill Recovery Institute; Aleutians West Coastal Resource Service Area (CRSA); Aleutians East Borough; Alaska Chadux Corporation; United States Coast Guard; and National Fish & Wildlife Foundation.

Publication Date: 200205

Title:

Aleutian Islands Coastal Resources Inventory and Environmental Sensitivity Maps: HABITATS (Habitat Polygons)

Edition: First

Geospatial Data Presentation Form: Digital vector data

Series Information:

Series Name: None

Issue Identification: Aleutian Islands

Publication Information:

Publication Place: Seattle, Washington

Publisher:

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington

Other Citation Details:

Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Prince William Sound Oil Spill Recovery Institute; Aleutians West Coastal Resource Service Area (CRSA); Aleutians East Borough; Alaska Chadux Corporation; United States Coast Guard; and National Fish & Wildlife Foundation.

Description:

Abstract

This data set contains biological resource data for seagrasses in the Aleutian Islands, Alaska. Vector polygons in this data set represent locations of seagrass concentration areas. Species-specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for Aleutians East Borough and Aleutians West Coastal Resource Service Area (CRSA). These data identify the marine and coastal environments and wildlife. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources.

Purpose.

The ESI data were collected, mapped, and digitized to provide environmental data for oil spill planning and response. The Clean Water Act with amendments by the Oil Pollution Act of 1990 requires response plans for immediate and effective protection of sensitive resources.

Time_Period_of_Content:

Time Period Information:

Range of Dates/Times:

Beginning_Date: 2000 Ending Date: 2001

Currentness Reference:

The biological data were compiled during 2000-2001. The currentness dates for these data range from 2000 to 2001 and are documented in the Source Information section.

Status:

Progress: Complete

Maintenance and Update Frequency: None Scheduled

Spatial Domain:

Bounding Coordinates:

West_Bounding_Coordinate: 172.42000 East_Bounding_Coordinate: -158.81002 North_Bounding_Coordinate: 58.133120 South Bounding_Coordinate: 48.351629

Keywords:

Theme:

Theme Keyword Thesaurus: None

Theme Keyword: ESI

Theme_Keyword: Sensitivity maps Theme_Keyword: Coastal resources Theme_Keyword: Oil spill planning

Theme_Keyword: Coastal Zone Management

Theme_Keyword: Wildlife *Theme_Keyword:* Habitats

Place:

Place Keyword Thesaurus: None Place Keyword: Aleutian Islands

Access Constraints: None

Use Constraints:

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

Browse Graphic:

Browse_Graphic_File_Name: datafig.jpg Browse Graphic File Description:

Relationships between spatial data layers and attribute data tables for the Aleutian Islands ESI data.

Browse Graphic File Type: JPEG

Data Set Credit:

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Prince William Sound Oil Spill Recovery Institute; Aleutians West Coastal Resource Service Area (CRSA); Aleutians East Borough; Alaska Chadux Corporation; United States Coast Guard; and National Fish & Wildlife Foundation.

Native Data Set Environment:

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.0.2) and ORACLE(r) RDBMS (version 8.0.5.0.0). The hardware configuration is Hewlett Packard workstations (models 715/50 and 712/80i) with UNIX operating system (HP-UX Release A.10.20), and PC's with Windows Operating System (NT4.0/2000). The Spatial_Data_Organization Information section refers only to the source files in the ARC export format. The following files are included in that data set: birds.e00, bio_lut.e00, biofile.e00, biores.e00, breed_e00, breed_dt.e00, esi.e00, faults.e00, fish.e00, fishl.e00, geo.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, m_mampt.e00, mgt.e00, nests.e00, seasonal.e00, soc_dat.e00, soc_lut.e00, socecon.e00, sources.e00, species.e00, status.e00, volcanos.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biofile, biores, breed_dt, seasonal, soc_dat, soc_lut, socecon, sources, species, and status.

Data_Quality_Information:

Attribute Accuracy:

Attribute Accuracy Report:

A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.

Logical Consistency Report:

A multi-stage error checking process, described in the above Attribute_Accuracy_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles,

unnecessary node, etc.), and ORACLE(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks. In the process of checking for topological and database consistencies, new ID's and RARNUM's or HUNUM's are also generated. The new ID's are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon, a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "resource at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

Completeness Report:

These data represent a synthesis of expert knowledge and available hardcopy reports and digital data on seagrass concentration areas. These data do not necessarily represent all seagrass occurrences in the Aleutian Islands, Alaska. The following species are included in this data set (Species_ID, Common Name, Scientific Name, if applicable): 1, Eelgrass, Zostrea marina.

Positional Accuracy:

Horizontal Positional Accuracy:

Horizontal Positional Accuracy Report:

Some of the spatial components of the biological data sets are developed using regional experts who estimate concentration areas. It is difficult to estimate the positional accuracy of such data, except to state that they are compiled on hardcopy basemaps with a scale of 1:250,000. The rest of the spatial components of the biological data sets are developed from pre-existing digital sources and reflect the positional accuracy of these original data. See the Lineage and Process_Description sections for more information on the original data source and how these data were integrated or manipulated to create the final data set. Note that biological resource data by their very nature are considered "fuzzy", and this should be understood when considering the positional accuracy of vector digital objects representing these resources.

Lineage:

Source Information:

Source Citation:

Citation Information:

Originator: Chris Dau

Publication Date: Unpublished material

Title: Personal Communication

Geospatial Data Presentation Form: Hardcopy Map

Source_Scale_Denominator: 250000

Type of Source Media: Paper

Source_Time_Period_of_Content:

Time Period Information:

Single Date/Time:

Calendar Date: 2000

Source Currentness Reference: Date of Communication

Source Citation Abbreviation: None

Source Contribution: Habitat Information

Process Step:

Process Description:

Sources of data used to depict seagrass distribution for this data layer came from personal interviews with resource experts from the U.S. Fish & Wildlife Service (USFWS) in Anchorage and with locals having expert knowledge; Alaska Dept. of Fish and Game's Most Environmentally Sensitive Areas maps and Habitat Management Guides; and Aleutians East and West Coastal Resource Service Area management plan. Information gathered from the interviews and other maps were compiled onto 1:250,000 scale U.S. Geological Survey (USGS) topographic maps. Digital data were transposed by hand onto the topographic maps since the format in which they were received was not compatible with the ESI data format. Following the data compilation phase, several sets of completed maps were sent out to the resource agencies for review, and edits were made based on recommendations by the resource experts. Concentration information varied, and descriptive terms such as "ABUNDANT", "HIGH", "PRESENT", and "SCATTERED" were used.

Process_Date: 200111
Process Contact:

Contact Information:

Contact Organization Primary:

Contact_Organization: NOAA, Office of Response and Restoration

Contact Person: Jill Petersen

Contact Address:

Address_Type: Physical address Address: 7600 Sand Point Way, N.E.

City: Seattle

State or Province: Washington

Postal Code: 98115-6349

Contact_Voice_Telephone: (206) 526-6944 Contact Facsimile Telephone: (206) 526-6329 Spatial Data Organization Information:

Direct_Spatial_Reference_Method: Vector

Point_and_Vector_Object_Information:

SDTS Terms Description:

SDTS Point and Vector Object Type: GT-polygon composed of rings

Point and Vector Object Count: 1667

SDTS Terms Description:

SDTS Point and Vector Object Type: Area point

Point and Vector Object Count: 1667

SDTS Terms Description:

SDTS Point and Vector Object Type: Complete chain

Point and Vector Object Count: 2754

SDTS Terms Description:

SDTS_Point_and_Vector_Object_Type: Link Point_and_Vector_Object_Count: 537958

SDTS Terms Description:

SDTS Point and Vector Object Type: Node, planar graph

Point and Vector Object Count: 2739

Spatial Reference Information:

Horizontal Coordinate System Definition:

Geographic:

Latitude_Resolution: 0.00005 Longitude_Resolution: 0.00005

Geographic Coordinate Units: Decimal degrees

Geodetic Model:

Horizontal_Datum_Name: North American Datum of 1927

Ellipsoid_Name: Clark 1866 Semi-major Axis: 6378206.4

Denominator_of_Flattening_Ratio: 294.978698

Entity and Attribute Information:

Overview Description:

Entity and Attribute Overview:

In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, HABITATS) is linked to the Biological Resources table (BIORES) using the unique ID and the lookup table BIO LUT, or it can be linked directly using RARNUM. The ID is a unique combination of the atlas number (for the Aleutian Islands, the number is 72) an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described below in detail. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure. Due to the complexity of the relational database model, the data items are also post-processed into a flat file format. This table, called BIOFILE, may be used in place of the relational files described below to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN_SPEC, S_F, T_E, NHP, DATE_PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G_SOURCE, S_SOURCE, and BREED. All of these items are the same as their counterparts in the individual data tables described below, except the BREED1-BREED5 and BREED items. BREED is a newly generated variable used to link to the BREED DT data table, a modified, more compact version of the relational BREED data table. BREED1-BREED5 give a text summary of when each life stage occurs within the associated map object. The life stages referred to are the same as those listed in the Detailed_Description of the BREED data table. The link to the BIOFILE may be made through the BIO_LUT, using ID to link to RARNUM, or BIOFILE may be linked directly to the RARNUM in each of the geographic layer's attribute data tables. As mentioned, BREED_DT is an auxiliary support data table to the flat file structure, which allows the user to do searches based on month for seasonal breeding activities. The link from the flat file to BREED DT is the BREED item. A second supporting data table is SOURCES. This is the same as the source file described above, and the link from the flat file is both G_SOURCE and S_SOURCE. It should be noted that although the flat file eases data query, it is not a normalized database structure, and actual updates performed by the states and other responsible agencies should be done using the relational data tables. The

entity-relationship diagram describing relationships between attribute tables in the ESI data structure does NOT include the BIOFILE data table, and this data table is NOT described in detail below.

```
Detailed_Description:
```

Entity Type:

Entity Type Label: HABITATS.PAT

Entity Type Definition:

The HABITATS.PAT table contains attribute information for the vector polygons representing seagrass concentration areas. Note that all attribute information is stored in a series of relational files, described below. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.

Entity Type Definition Source: Research Planning, Inc.

Attribute:

Attribute_Label: ID Attribute Definition:

An identifier that links vector objects in the biology data layers to records in the BIO_LUT data table. ID is a concatenation of atlas number (72), element number (3), and record number. ID values of 9999 are holes in polygons and do not contain information.

Attribute_Definition_Source: NOAA

Attribute Domain Values:

Range Domain:

Range Domain Minimum: 720300002 Range Domain Maximum: 720301521

Attribute:

Attribute Label: RARNUM

Attribute Definition:

An identifier that links directly to the BIORES table or the flat format BIOFILE table. RARNUM values of 0 are holes in the polygons and do not contain information.

Attribute Definition Source: NOAA

Attribute Domain Values:

Range Domain:

Range_Domain_Minimum: 72000570 Range_Domain_Maximum: 72000579

 $Detailed_Description:$

Entity Type:

Entity_Type_Label: BIO_LUT Entity Type Definition:

The data table BIO_LUT is a lookup table that contains items necessary for linking vector objects in the biological data layers with the BIORES data table. Note that all attribute information is stored in a series of relational files, described below. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

Entity_Type_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: RARNUM

Attribute_Definition:

An identifier that links records in the BIO_LUT data table to records in the BIORES data table or the flat format BIOFILE data table. RARNUM values of 0 are holes in the polygons and do not contain information.

Attribute_Definition_Source: NOAA

Attribute Domain Values:

Range_Domain:

Range_Domain_Minimum: 72000001 Range_Domain_Maximum: 72000615

Attribute:

Attribute Label: ID

Attribute Definition:

An identifier that links vector objects in the biology data layers to records in the BIO_LUT data table. ID is a concatenation of atlas number (72), element number (3), and record number. ID values of 9999 are holes in polygons and do not contain information.

Attribute Definition Source: NOAA

Attribute_Domain_Values:

Range Domain:

Range Domain Minimum: 720100002 Range Domain Maximum: 723400623

Detailed Description:

Entity_Type:

Entity Type Label: BIORES

Entity Type Definition:

The data table BIORES contains both biological attribute data and items necessary for linking vector objects in the biological data layers via the BIO_LUT data table to other associated data tables. See the Browse_Graphic

section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

```
Entity Type Definition Source: Research Planning, Inc.
```

Attribute:

Attribute Label: RARNUM

Attribute Definition:

An identifier that links records in the BIORES data table to records in the BIO_LUT data table or the flat format BIOFILE data table.

Attribute_Definition_Source: NOAA

Attribute Domain Values:

Range Domain:

Range Domain Minimum: 072000001 Range Domain Maximum: 072000615

Attribute:

Attribute Label: SPECIES_ID

Attribute Definition:

Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain Values:

Range Domain:

Range_Domain_Minimum: 1
Range_Domain_Maximum: N

Attribute:

Attribute Label: CONC

Attribute Definition:

The field CONC refers to "concentration," abundance, or density values, and may contain descriptive terms, such as "ABUNDANT", "HIGH", "PRESENT", and "SCATTERED", or may be blank if the concentration was unknown.

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: Any character Enumerated Domain Value Definition: Free text

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: SEASON ID

Attribute Definition:

Numeric identifier for the unique monthly presence and life history characteristics of each species at a given location.

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Range Domain:

Range_Domain_Minimum: 1 Range_Domain_Maximum: N

Attribute:

Attribute Label: G_SOURCE

Attribute Definition:

Geographic source identifier that links records in the BIORES data table to records in the SOURCES data table. *Attribute Definition Source:* Research Planning, Inc.

Attribute Domain Values:

Range Domain:

Attribute:

Attribute Label: S_SOURCE

Attribute Definition:

Seasonality source identifier that links records in the BIORES data table to records in the SOURCES data table. *Attribute Definition Source:* Research Planning, Inc.

Attribute Domain Values:

Range Domain:

Attribute:

Attribute Label: ELEMENT

Attribute Definition: Major categories of biological data Attribute Definition Source: Research Planning, Inc.

```
Environmental Sensitivity Maps: HABITATS (Habitat
            Attribute Domain Values:
                  Enumerated Domain:
                         Enumerated Domain Value: BIRD
                         Enumerated Domain Value Definition: Birds
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                  Enumerated Domain:
                         Enumerated Domain Value: FISH
                         Enumerated Domain Value Definition: Fish
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                  Enumerate \bar{d} Domain:
                         Enumerated Domain Value: HABITAT
                        Enumerated Domain Value Definition: Habitats and plants
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                  Enumerated Domain:
                         Enumerated Domain Value: INVERT
                         Enumerated Domain Value Definition: Invertebrates
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                  Enumerated Domain:
                         Enumerated Domain Value: M_MAMMAL
                         Enumerated Domain Value Definition: Marine mammals
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                  Enumerated Domain:
                        Enumerated Domain Value: REPTILE
                         Enumerated Domain Value Definition: Reptiles and Amphibians
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                  Enumerated Domain:
                         Enumerated Domain Value: T_MAMMAL
                        Enumerated Domain Value Definition: Terrestrial mammals
                        Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
            Attribute_Label: EL_SPE
            Attribute Definition:
                  Concatenation of ELEMENT and SPECIES_ID. This item links records in the BIORES data table to records in
                  the SPECIES and STATUS data tables.
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                  Enumerated Domain:
                         Enumerated Domain Value: E#####
                        Enumerated Domain Value Definition:
                               Where E is the first character of ELEMENT and the next five characters are SPECIES_ID (eg.
                               ELEMENT = 'BIRD' and SPECIES_ID = 1; EL_SPE = 'B00001').
                        Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: EL_SPE_SEA
            Attribute Definition:
                  Concatenation of ELEMENT, SPECIES_ID, and SEASON_ID. This item links records in the BIORES data
                  table to records in the SEASONAL and BREED data tables.
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                  Enumerated Domain:
                        Enumerated Domain Value: E######
                         Enumerated Domain Value Definition:
                               Where E is the first character of ELEMENT, the next five characters are SPECIES_ID, and the
                               last two characters are SEASON ID (eg. ELEMENT = 'BIRD', SPECIES ID = 1 and
                               SEASON_ID = 1; EL_SPE_SEA = 'B0000101').
                        Enumerated Domain Value Definition Source: Research Planning, Inc.
Detailed Description:
      Entity Type:
            Entity Type Label: SPECIES
            Entity Type Definition:
```

The data table SPECIES identifies all species in the ESI data set. See the Browse_Graphic section for a link to

```
Environmental Sensitivity Maps: HABITATS (Habitat
       the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI
       data structure. Refer to the Completeness Report for a list of layer-specific species.
Entity Type Definition Source: Research Planning, Inc.
```

Attribute:

Attribute Label: SPECIES_ID

Attribute Definition:

Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA.

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Range Domain:

Range Domain Minimum: 1 Range Domain Maximum: N

Attribute:

Attribute Label: NAME

Attribute Definition: Species common name

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: Species common name for the entire ESI data set

Enumerated Domain Value Definition: Free text

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: GEN_SPEC

Attribute Definition: Species scientific name

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: Species scientific name for the entire ESI data set.

Enumerated Domain Value Definition: Free text

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: ELEMENT

Attribute Definition: Major categories of biological data

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: BIRD

Enumerated Domain Value Definition: Birds

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: FISH

Enumerated Domain Value Definition: Fish

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: HABITAT

Enumerated Domain Value Definition: Habitats and plants

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain_Value: INVERT

Enumerated Domain Value Definition: Invertebrates

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: M_MAMMAL

Enumerated Domain Value Definition: Marine Mammals

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

 $E\overline{n}umerate\overline{d}$ Domain:

Enumerated Domain Value: REPTILE

Enumerated Domain Value Definition: Reptiles and Amphibians

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

```
Enumerated_Domain_Value: T_MAMMAL
```

Enumerated Domain Value Definition: Terrestrial Mammals

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: SUBELEMENT

Attribute Definition: Element subgroup delineating a logical grouping of species

Attribute Definition Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated Domain:

Enumerated Domain Value: alcid

Enumerated Domain Value Definition: Alcid

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated Domain:

Enumerated Domain Value: bivalve

Enumerated Domain Value Definition: Bivalve

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: crab

Enumerated Domain Value Definition: Crab

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute Domain Values:

 $Enumerated_Domain$:

Enumerated Domain Value: diadromous

Enumerated Domain Value Definition: Diadromous fish

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: diving

Enumerated Domain Value Definition: Diving bird

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: e_nursery

Enumerated Domain Value Definition: Estuarine nursery fish

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: gull_tern

Enumerated Domain Value Definition: Gull or tern

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated_Domain:

Enumerated Domain Value: m_benthic

Enumerated_Domain_Value_Definition: Marine benthic fish

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: m_pelagic

Enumerated_Domain_Value_Definition: Marine pelagic fish

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: pelagic

Enumerated_Domain_Value_Definition: Pelagic bird

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: pinniped

Enumerated Domain Value Definition: Pinniped

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: sav

Enumerated Domain Value Definition: Submersed aquatic vegetation

Enumerated Domain Value Definition Source: Research Planning, Inc.

```
Enumerated Domain:
                         Enumerated Domain Value: shorebird
                         Enumerated Domain Value Definition: Shorebird
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: sea_otter
                         Enumerated Domain Value Definition: Otter
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerate \bar{d} Domain:
                         Enumerated Domain Value: waterfowl
                         Enumerated Domain Value Definition: Waterfowl
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: NHP
            Attribute Definition: Natural Heritage Program global ranking
            Attribute Definition Source: Network of Natural Heritage Program
            Attribute Domain Values:
                   Codeset Domain:
                         Codeset Name: NHP Global Conservation Status Rank
                         Codeset Source: Natural Heritage Program
      Attribute:
            Attribute Label: DATE PUB
            Attribute Definition: Date of NHP listing
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: 0
                         Enumerated Domain Value Definition: Not ranked
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: Numeric
                         Enumerated Domain Value Definition: mmyyyy
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: EL_SPE
            Attribute Definition:
                   Concatenation of ELEMENT and SPECIES ID. This item links records in the SPECIES data table to records in
                   the BIORES and STATUS data tables.
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: E#####
                         Enumerated Domain Value Definition:
                                Where E is the first character of ELEMENT and the next five characters are SPECIES_ID (eg.
                               ELEMENT = 'BIRD' and SPECIES_ID = 1; EL_SPE = 'B00001').
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
Detailed Description:
      Entity Type:
            Entity_Type_Label: SEASONAL
            Entity Type Definition:
                   The data table SEASONAL contains information on the seasonal presence of each species associated with each
                   spatial vector object. See the Browse_Graphic section for a link to the entity-relationship diagram, which
                   describes the way this table relates to other attribute tables in the ESI data structure.
            Entity Type Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: ELEMENT
            Attribute Definition: Major categories of biological data
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: BIRD
                         Enumerated Domain Value Definition: Birds
```

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

```
Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: FISH
                  Enumerated Domain Value Definition: Fish
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: HABITAT
                  Enumerated Domain Value Definition: Habitats and plants
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerate \bar{d} Domain:
                  Enumerated Domain Value: INVERT
                  Enumerated Domain Value Definition: Invertebrates
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: M_MAMMAL
                  Enumerated Domain Value Definition: Marine Mammals
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: REPTILE
                  Enumerated Domain Value Definition: Reptiles and Amphibians
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: T_MAMMAL
                  Enumerated Domain Value Definition: Terrestrial Mammals
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: SPECIES_ID
      Attribute Definition:
            Numeric identifier for each species that is unique within each element and refers to a nationwide ESI species list
            maintained at NOAA.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Range Domain:
                  Range Domain Minimum: 1
                  Range Domain Maximum: N
Attribute:
      Attribute Label: SEASON_ID
      Attribute Definition:
            Numeric identifier for the unique monthly presence and life history characteristics of each species at a given
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Range Domain:
                  Range Domain Minimum: 1
                  Range Domain Maximum: N
Attribute:
      Attribute Label: JAN
      Attribute Definition: January
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: X
                  Enumerated Domain Value Definition: Present in January
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: FEB
      Attribute Definition: February
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: X
```

Enumerated Domain Value Definition: Present in February

Enumerated Domain Value Definition Source: Research Planning, Inc. Attribute: Attribute Label: MAR Attribute Definition: March Attribute Definition Source: Research Planning, Inc. Attribute Domain Values: Enumerated Domain: Enumerated Domain Value: X Enumerated Domain Value Definition: Present in March Enumerated Domain Value Definition Source: Research Planning, Inc. Attribute: Attribute Label: APR Attribute Definition: April Attribute Definition Source: Research Planning, Inc. Attribute Domain Values: Enumerated Domain: Enumerated Domain Value: X Enumerated Domain Value Definition: Present in April Enumerated Domain Value Definition Source: Research Planning, Inc. Attribute: Attribute Label: MAY Attribute Definition: May Attribute Definition Source: Research Planning, Inc. Attribute Domain Values: Enumerated Domain: Enumerated Domain Value: X Enumerated Domain Value Definition: Present in May Enumerated Domain Value Definition Source: Research Planning, Inc. Attribute: Attribute Label: JUN Attribute Definition: June Attribute Definition Source: Research Planning, Inc. Attribute Domain Values: Enumerated Domain: Enumerated Domain Value: X Enumerated Domain Value Definition: Present in June Enumerated Domain Value Definition Source: Research Planning, Inc. Attribute: Attribute Label: JUL Attribute Definition: July Attribute Definition Source: Research Planning, Inc. Attribute Domain Values: Enumerated Domain: Enumerated Domain Value: X Enumerated Domain Value Definition: Present in July Enumerated Domain Value Definition Source: Research Planning, Inc. Attribute: Attribute Label: AUG Attribute Definition: August Attribute Definition Source: Research Planning, Inc. Attribute Domain Values: Enumerated Domain: Enumerated Domain Value: X Enumerated Domain Value Definition: Present in August Enumerated Domain Value Definition Source: Research Planning, Inc. Attribute: Attribute Label: SEP Attribute_Definition: September Attribute Definition Source: Research Planning, Inc. Attribute Domain Values: Enumerated Domain: Enumerated Domain Value: X

Enumerated Domain Value Definition: Present in September

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute_Label: OCT
Attribute_Definition: October

```
Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: X
                         Enumerated Domain Value Definition: Present in October
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: NOV
            Attribute Definition: November
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: X
                         Enumerated Domain Value Definition: Present in November
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: DEC
            Attribute Definition: December
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: X
                         Enumerated Domain Value Definition: Present in December
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: EL_SPE_SEA
            Attribute_Definition:
                   Concatenation of ELEMENT, SPECIES_ID, and SEASON_ID. This item links records in the SEASONAL data
                   table to records in the BIORES and BREED data tables.
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: E######
                         Enumerated Domain Value Definition:
                                Where E is the first character of ELEMENT, the next five characters are SPECIES_ID, and the
                               last two characters are SEASON_ID (eg. ELEMENT = 'BIRD', SPECIES_ID = 1 and
                               SEASON ID = 1; EL SPE SEA = 'B0000101').
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
Detailed Description:
      Entity Type:
             Entity Type Label: BREED
             Entity Type Definition:
                   The data table BREED identifies the monthly presence of certain life-history stages or activities for each species
                   at a given location.
             Entity Type Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: EL_SPE_SEA
            Attribute Definition:
                   Concatenation of ELEMENT, SPECIES_ID, and SEASON_ID. This item links records in the BREED data
                   table to records in the BIORES and SEASONAL data tables.
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Enumerated Domain:
                         Enumerated Domain Value: E######
                         Enumerated Domain Value Definition:
                                Where E is the first character of ELEMENT, the next five characters are SPECIES_ID, and the
                               last two characters are SEASON_ID (eg. ELEMENT = 'BIRD', SPECIES_ID = 1 and
                               SEASON_ID = 1; EL_SPE_SEA = 'B0000101').
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: MONTH
            Attribute Definition:
                   Two-digit calendar month. Each life history stage or activity type for a particular species can have up to 12
                   records to account for each month of the year.
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                   Range Domain:
```

Range_Domain_Minimum: 1
Range_Domain_Maximum: 12

Attribute:

Attribute_Label: BREED1 Attribute Definition:

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED1 = nesting; if ELEMENT is "FISH" then BREED1 = spawning; if ELEMENT is "INVERT" then BREED1 = spawning/mating; if

ELEMENT is "REPTILE" then BREED1 = nesting; if ELEMENT is "M_MAMMAL" then BREED1 = mating. This attribute is not used for HABITAT or T_MAMMAL elements.

Attribute Definition Source: Research Planning, Inc.

Attribute Domain_Values:

Enumerated Domain:

Enumerated Domain Value: Y

Enumerated Domain Value Definition: Life-history stage or activity present

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: N

Enumerated_Domain_Value_Definition: Life-history stage or activity not present

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: -

Enumerated Domain Value Definition:

Breed category not used or not appropriate for record(s) in question

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: BREED2

 $Attribute_Definition:$

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED2 = laying; if ELEMENT is "FISH" then BREED2 = eggs; if ELEMENT is "INVERT" then BREED2 = eggs; if ELEMENT is "REPTILE" then BREED2 = hatching; if ELEMENT is "M_MAMMAL" then BREED2 = calving. This attribute is not used for HABITAT or T_MAMMAL elements.

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated_Domain_Value: Y

Enumerated Domain Value Definition: Life-history stage or activity present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated_Domain_Value: N

Enumerated Domain Value Definition: Life-history stage or activity not present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: -

Enumerated Domain Value Definition:

Breed category not used or not appropriate for record(s) in question

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: BREED3

Attribute Definition:

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED3 = hatching; if ELEMENT is "FISH" then BREED3 = larvae; if ELEMENT is "INVERT" then BREED3 = larvae; if ELEMENT is

"REPTILE" then BREED3 = internesting; if ELEMENT is "M_MAMMAL" then BREED3 = pupping. This attribute is not used for HABITAT or T_MAMMAL elements.

Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: Y

Enumerated Domain Value Definition: Life-history stage or activity present

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated Domain:

Enumerated Domain_Value: N

Enumerated_Domain_Value_Definition: Life-history stage or activity not present

```
Aleutian Islands Coastal Resources Inventory and
                                                                                     Environmental Sensitivity Maps: HABITATS (Habitat
            Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
            Enumerated Domain Value: -
             Enumerated Domain Value Definition:
                   Breed category not used or not appropriate for record(s) in question
             Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Label: BREED4
Attribute Definition:
      Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED4 = fledging; if ELEMENT is
      "FISH" then BREED4 = juvenile; if ELEMENT is "INVERT" then BREED4 = juvenile; if ELEMENT is
      "REPTILE" then BREED4 = juvenile; if ELEMENT is "M_MAMMAL" then BREED4 = molting. This
      attribute is not used for HABİTAT or T_MAMMAL elements.
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
             Enumerated Domain Value: Y
            Enumerated Domain Value Definition: Life-history stage or activity present
             Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
            Enumerated Domain Value: N
             Enumerated Domain Value Definition: Life-history stage or activity not present
             Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
             Enumerated Domain Value: -
             Enumerated Domain Value Definition:
                   Breed category not used or not appropriate for record(s) in question
            Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Label: BREED5
Attribute Definition:
      Life history stage or activity type, where: if ELEMENT is "FISH" then BREED5 = adults; if ELEMENT is
      "INVERT" then BREED5 = adults; if ELEMENT is "REPTILE" then BREED5 = adults. This attribute is not
      used for BIRD, M_MAMMAL, HABITAT, or T_MAMMAL elements.
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
             Enumerated Domain Value: Y
             Enumerated Domain Value Definition: Life-history stage or activity present
             Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
             Enumerated Domain Value: N
            Enumerated Domain Value Definition: Life-history stage or activity not present
             Enumerated Domain Value Definition Source: Research Planning, Inc.
      Enumerated Domain:
            Enumerated Domain Value: -
             Enumerated Domain Value Definition:
                   Breed category not used or not appropriate for record(s) in question
             Enumerated Domain Value Definition Source: Research Planning, Inc.
```

Attribute Domain Values:

Detailed Description:

Attribute:

Attribute:

Entity Type:

Entity Type Label: SOURCES

Entity Type Definition:

The data table SOURCES contains the primary sources used to create the ESI data set. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

Entity Type Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: SOURCE_ID

Attribute Definition:

Source identifier that links records in the SOURCES data table to the items G_SOURCE and A_SOURCE in the SOC DAT table, and to G SOURCE and S SOURCE in the BIORES table.

```
Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Range Domain:
                   Range Domain Minimum: 1
                   Range Domain Maximum: N
Attribute:
      Attribute Label: ORIGINATOR
      Attribute Definition: Author or developer of source material or data set
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: Any character
                   Enumerated Domain Value Definition: Free text
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: DATE PUB
      Attribute Definition:
            Date of source material, publication, or date of personal communication with expert source
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: Numeric
                   Enumerated Domain Value Definition: mmyyyy
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: TITLE
      Attribute Definition: Title of source material or data
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: Any character
                   Enumerated Domain Value Definition: Free text
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: DATA_FORMAT
      Attribute Definition: The format of the source material
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: Any character
                   Enumerated Domain Value Definition: Free text
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: PUBLICATION
      Attribute Definition: Additional citation information
      Attribute Definition Source: Research Planning, Inc.
      Attribute_Domain Values:
            Enumerated Domain:
                   Enumerated Domain_Value: Any character
                   Enumerated Domain Value Definition: Free text
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: SCALE
      Attribute Definition: Scale denominator of the source
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: integer
                   Enumerated Domain Value Definition: Any integer
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: TIME_PERIOD
      Attribute Definition:
            Date(s) of data collection that the source material is based upon.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
```

```
Enumerated Domain Value: Numeric
                         Enumerated Domain Value Definition: yyyy
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
Detailed Description:
      Entity Type:
            Entity_Type_Label: STATUS
            Entity Type Definition:
                  The data table STATUS identifies the species that are listed as either threatened or endangered by a state or
                  federal authority. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes
                  the way this table relates to other attribute tables in the ESI data structure.
            Entity Type Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: ELEMENT
            Attribute Definition: Major categories of biological data
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                  Enumerated Domain:
                         Enumerated Domain Value: BIRD
                         Enumerated Domain Value Definition: Birds
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                  Enumerated Domain:
                         Enumerated Domain Value: FISH
                         Enumerated Domain Value Definition: Fish
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                  Enumerated Domain:
                         Enumerated Domain Value: HABITAT
                         Enumerated Domain Value Definition: Habitats and Plants
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                  Enumerated Domain:
                         Enumerated Domain Value: INVERT
                         Enumerated Domain Value Definition: Invertebrates
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                  Enumerated Domain:
                         Enumerated Domain Value: M MAMMAL
                         Enumerated Domain Value Definition: Marine Mammals
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                  Enumerated Domain:
                         Enumerated Domain Value: REPTILE
                         Enumerated Domain Value Definition: Reptiles and Amphibians
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                  Enumerated Domain:
                         Enumerated Domain Value: T_MAMMAL
                         Enumerated Domain Value Definition: Terrestrial Mammals
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: SPECIES_ID
            Attribute Definition:
                  Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI
                  species list maintained at NOAA
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                  Range Domain:
                         Range Domain Minimum: 1
                         Range Domain Maximum: N
      Attribute:
            Attribute Label: STATE
            Attribute Definition: Two-letter state abbreviation
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
```

Enumerated Domain:

Enumerated Domain Value: Any character

```
Enumerated Domain Value Definition: Two-letter state abbreviation
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: S_F
      Attribute Definition: State and Federal status.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: F
                   Enumerated Domain Value Definition: Federally listed
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: S
                   Enumerated Domain Value Definition: State listed
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: S/F
                   Enumerated Domain Value Definition: State and federally listed
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: T_E
      Attribute Definition: Threatened and endangered status.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: E
                   Enumerated Domain Value Definition: Endangered on state or federal list
                   Enumerated Domain Value Definition Source: U.S. Fish and Wildlife Service
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: T
                   Enumerated Domain Value Definition: Threatened on state or federal list
                  Enumerated Domain Value Definition Source: U.S. Fish and Wildlife Service
Attribute:
      Attribute_Label: DATE_PUB
      Attribute Definition:
            Publication date of source material used to assign state and federal status values for each species, if used.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: Numeric
                   Enumerated Domain Value Definition: mmyyyy
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: EL_SPE
      Attribute Definition:
            Concatenation of ELEMENT and SPECIES_ID. This item links the STATUS data table to the BIORES and
            SPECIES data tables.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: E#####
                   Enumerated Domain Value Definition:
                         Where E is the first character of ELEMENT and the next five characters are SPECIES ID (eg.
                         ELEMENT = 'BIRD' and SPECIES ID = 1; EL SPE = 'B00001').
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
```

Distribution Information:

Distributor:

 $Contact_Information:$

Contact Person Primary:

Contact Person: John Kaperick

Contact Organization: NOAA, Office of Response and Restoration

Contact Address:

Address_Type: Physical Address Address: 7600 Sand Point Way, N.E.

City: Seattle

State_or_Province: Washington Postal Code: 98115-6349

Contact_Voice_Telephone: (206) 526-6400 Contact_Facsimile_Telephone: (206) 526-6329

Resource_Description: ESI Atlas for the Aleutian Islands

Distribution Liability:

Although these data have been processed successfully on a computer system at the National Oceanic and Atmospheric Administration, no warranty, expressed or implied, is made by NOAA regarding the utility of the data on any other system, nor shall the act of distribution constitute any such warranty. NOAA warrants the delivery of this product in computer-readable format, and will offer a replacement copy of the product when the product is determined unreadable by computer-input peripherals, or when the physical medium is delivered in damaged condition.

Custom Order Process:

Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to a wider community of GIS/mapping users. Distribution formats include ARC export, MOSS and Shape files, and MARPLOT map folders. An ArcView ESI project and ESI_Viewer product are also included on the distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

 $Metadata_Reference_Information:$

Metadata Date: 200205

Metadata Review Date: 200205

Metadata Contact:

Contact Information:

Contact Person Primary:

Contact Person: Jill Petersen

Contact Organization: NOAA, Office of Response and Restoration

Contact Position: GIS Manager

Contact Address:

Address_Type: Physical Address Address: 7600 Sand Point Way, N.E.

City: Seattle

State_or_Province: Washington Postal Code: 98115-6349

Contact_Voice_Telephone: (206) 526-6944 Contact Facsimile Telephone: (206) 526-6329

Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov

Metadata Standard Name: Content Standards for Digital Geospatial Metadata

Metadata Standard Version: FGDC-STD-001-1998

Generated by mp version 2.7.23 on Thu May 16 15:43:34 2002

Aleutian Islands Coastal Resources Inventory and Environmental Sensitivity Maps: MGT (Management Area Polygons)

Metadata also available as - [Parseable text] - [SGML]

Metadata:

- Identification Information
- Data Quality Information
- Spatial Data Organization Information
- Spatial Reference Information
- Entity and Attribute Information
- Distribution Information
- Metadata Reference Information

Identification Information:

Citation:

Citation Information:

Originator:

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Prince William Sound Oil Spill Recovery Institute; Aleutians West Coastal Resource Service Area (CRSA); Aleutians East Borough; Alaska Chadux Corporation; United States Coast Guard; and National Fish & Wildlife Foundation.

Publication Date: 200205

Title:

Aleutian Islands Coastal Resources Inventory and Environmental Sensitivity Maps: MGT (Management Area Polygons)

Edition: First

Geospatial Data Presentation Form: Digital vector data

Series Information:

Series Name: None

Issue Identification: Aleutian Islands

Publication Information:

Publication Place: Seattle, Washington

Publisher:

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington

Other_Citation_Details:

Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Prince William Sound Oil Spill Recovery Institute; Aleutians West Coastal Resource Service Area (CRSA); Aleutians East Borough; Alaska Chadux Corporation; United States Coast Guard; and National Fish & Wildlife Foundation.

Description:

Abstract

This data set contains management area data for National Wildlife Refuges in the Aleutian Islands, Alaska. Vector polygons in this data set represent management areas. Location-specific type and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for Aleutians East Borough and Aleutians West Coastal Resource Service Area (CRSA). These data identify the marine and coastal environments and wildlife. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources. See also the SOCECON (Socioeconomic Resource Points and Lines) data layer, part of the larger Aleutians East/Aleutians West ESI database, for additional human-use information.

Purpose:

The ESI data were collected, mapped, and digitized to provide environmental data for oil spill planning and response. The Clean Water Act with amendments by the Oil Pollution Act of 1990 requires response plans for immediate and effective protection of sensitive resources.

Time Period of Content:

Time Period Information:

Range of Dates/Times:

Beginning_Date: 2000 Ending_Date: 2001

Currentness_Reference:

These data were compiled during 2000-2001. The currentness dates for these data range from 2000 to 2001 and are documented in the Source_Information section.

Status:

Progress: Complete

Maintenance and Update Frequency: None Scheduled

Spatial Domain:

Bounding Coordinates:

West_Bounding_Coordinate: 172.42000 East_Bounding_Coordinate: -158.81002 North_Bounding_Coordinate: 58.133120 South_Bounding_Coordinate: 48.351629

Keywords:

Theme:

Theme Keyword Thesaurus: None

Theme Keyword: ESI

Theme_Keyword: Sensitivity maps Theme_Keyword: Coastal resources Theme_Keyword: Oil spill planning

Theme_Keyword: Coastal Zone Management

Theme_Keyword: Wildlife Theme Keyword: Management

Place:

Place_Keyword_Thesaurus: None Place Keyword: Aleutian Islands

Access Constraints: None

Use Constraints:

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

Browse Graphic:

Browse_Graphic_File_Name: datafig.jpg Browse Graphic File Description:

Relationships between spatial data layers and attribute data tables for the Aleutian Islands ESI data.

Browse Graphic File Type: JPEG

Data Set Credit:

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Prince William Sound Oil Spill Recovery Institute; Aleutians West Coastal Resource Service Area (CRSA); Aleutians East Borough; Alaska Chadux Corporation; United States Coast Guard; and National Fish & Wildlife Foundation.

Native Data Set Environment:

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.0.2) and ORACLE(r) RDBMS (version 8.0.5.0.0). The hardware configuration is Hewlett Packard workstations (models 715/50 and 712/80i) with UNIX operating system (HP-UX Release A.10.20), and PC's with Windows Operating System (NT4.0/2000). The Spatial_Data_Organization Information section refers only to the source files in the ARC export format. The following files are included in that data set: birds.e00, bio_lut.e00, biofile.e00, biores.e00, breed_e00, breed_dt.e00, esi.e00, faults.e00, fish.e00, fishl.e00, geo.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, m_mampt.e00, mgt.e00, nests.e00, seasonal.e00, soc_dat.e00, soc_lut.e00, socecon.e00, sources.e00, species.e00, status.e00, volcanos.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biofile, biores, breed, breed dt, seasonal, soc_dat, soc_lut, socecon, sources, species, and status.

Data Quality Information:

Attribute Accuracy:

Attribute Accuracy_Report:

A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.

Logical Consistency Report:

A multi-stage error checking process, described in the above Attribute_Accuracy_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency

checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary node, etc.), and ORACLE(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks.

Completeness Report:

These data represent a synthesis of hardcopy and digital boundaries for management areas. Refer to the SOCECON (Socioeconomic Resource Points and Lines) data layer for additional human-use information. These data do not represent all management areas in the Aleutian Islands.

Positional Accuracy:

Horizontal Positional Accuracy:

Horizontal Positional Accuracy Report:

The MGT data set was developed from pre-existing digital sources and reflects the positional accuracy of these original data. See the Lineage and Process_Description sections for more information on the original data source and how these data were integrated or manipulated to create the final data set.

Lineage:

Source Information:

Source Citation:

Citation Information:

Originator: Alaska Department of Natural Resources

Publication Date: 2001

Title: Administrative Large Parcel Boundaries

Geospatial Data Presentation Form: Digital vector data

Publication Information:

Publication Place: Anchorage, Alaska

Publisher: Alaska Department of Natural Resources

Source_Scale_Denominator: 63360
Type_of_Source_Media: CD-ROM
Source_Time_Period_of_Content:
 Time_Period_Information:

e_1 erioa_injormation.

Single_Date/Time:

Calendar_Date: 2000

Source_Currentness_Reference: Date of study

Source Citation Abbreviation: None

Source Contribution: Management information

Process Step:

Process_Description:

The data source used to depict management areas for this data layer came from Alaska Dept. of Natural Resources administrative boundary coverage. Resource agencies confirmed the accuracy of the boundaries during review.

Process_Date: 200111
Process Contact:

Contact Information:

Contact Organization Primary:

Contact_Organization: NOAA, Office of Response and Restoration

Contact Person: Jill Petersen

Contact Address:

Address_Type: Physical address Address: 7600 Sand Point Way, N.E.

City: Seattle

State_or_Province: Washington

| Postal_Code: 98115-6349 | act Voice Telephone: (206) 526-69

Contact_Voice_Telephone: (206) 526-6944 Contact Facsimile Telephone: (206) 526-6329

Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov

Spatial Data Organization Information:

Direct_Spatial_Reference_Method: Vector

 $Point_and_Vector_Object_Information:$

SDTS Terms Description:

SDTS Point and Vector Object Type: GT-polygon composed of rings

Point and Vector Object Count: 18

SDTS Terms Description:

SDTS Point and Vector Object_Type: Area point

Point_and_Vector_Object_Count: 18

SDTS_Terms_Description:

SDTS Point and Vector Object Type: Complete chain

Point and Vector Object Count: 482

SDTS Terms Description:

SDTS_Point_and_Vector_Object_Type: Link Point and Vector Object Count: 180804

SDTS Terms Description:

SDTS_Point_and_Vector_Object_Type: Node, planar graph

Point and Vector Object Count: 473

Spatial Reference Information:

Horizontal Coordinate System Definition:

Geographic:

Latitude_Resolution: 0.00005 Longitude Resolution: 0.00005

Geographic Coordinate Units: Decimal degrees

Geodetic Model:

Horizontal Datum Name: North American Datum of 1927

Ellipsoid_Name: Clark 1866 Semi-major Axis: 6378206.4

Denominator of Flattening Ratio: 294.978698

Entity and Attribute Information:

Overview Description:

Entity and Attribute Overview:

In addition to the geographic data layers, two relational attribute or data tables, SOC_DAT and SOURCES, are used to store the complex socioeconomic data in the ESI data structure. The geographic data layer containing socioeconomic resource information (in this case, MGT) is linked to the Socioeconomic Resources table (SOC_DAT) using the unique ID and the lookup table SOC_LUT, or it can be linked directly using HUNUM. HUNUM is a unique reference number concatenated with the atlas number (the atlas number for the Aleutian Islands atlas is 72). ID is a unique combination of the atlas number (72), an element-specific number (MGT = 11) and a unique record number. SOC_DAT and the other relational data tables are described below in detail. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure.

Detailed Description:

Entity_Type:

Entity Type Label: MGT.PAT

Entity Type Definition:

The MGT.PAT table contains attribute information for the vector polygons representing national wildlife refuges. Note that all attribute information is stored in a series of relational files, described below. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.

Entity Type Definition Source: Research Planning, Inc.

Attribute:

Attribute_Label: TYPE Attribute Definition:

The human-use features depicted on the maps are those that could be impacted by an oil spill or could provide access for response operations

Attribute Definition Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated Domain:

Enumerated_Domain_Value: WR

Enumerated Domain Value Definition: WILDLIFE REFUGE

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute_Label: ID

 $Attribute_Definition:$

An identifier that links vector objects in the human-use data layers to records in the SOC_LUT data table. ID is a concatenation of atlas number (72), element number (11), and record number. ID values of 9999 are holes in the polygon and do not contain information.

Attribute Definition Source: NOAA

Attribute Domain Values:

Range_Domain:

Attribute:

```
Attribute Label: HUNUM
```

Attribute Definition:

An identifier that links directly to the SOC_DAT table. HUNUM values of 0 are holes in the polygon and do not contain information.

Attribute Definition Source: NOAA

Attribute Domain Values:

Range Domain:

Range_Domain_Minimum: 72000001 Range_Domain_Maximum: 72000066

Detailed Description:

Entity Type:

Entity Type Label: SOC_LUT

Entity Type Definition:

The data table SOC_LUT is a lookup table that contains items necessary for linking vector objects in the human-use data layers with the SOC_DAT data table. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

Entity Type Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: HUNUM

Attribute Definition:

An identifier that links records in the SOC_LUT data table to records in the SOC_DAT data table. HUNUM values of 0 are holes in the polygon and do not contain information.

Attribute Definition Source: NOAA

Attribute Domain Values:

Range Domain:

Range_Domain_Minimum: 72000001 Range_Domain_Maximum: 72000067

Attribute:

Attribute_Label: ID Attribute_Definition:

An identifier that links vector objects in the human-use data layers to records in the SOC_LUT data table. ID is a concatenation of atlas number (72), element number (11), and record number. ID values of 9999 are holes in the polygon and do not contain information.

Attribute Definition Source: NOAA

Attribute Domain Values:

Range Domain:

Range Domain Minimum: 721000001 Range Domain Maximum: 721100019

Detailed_Description:

Entity_Type:

Entity Type Label: SOC_DAT

Entity_Type_Definition:

The data table SOC_DAT contains both human-use attribute data and items necessary for linking the human-use spatial data layers to the SOURCES data table. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

Entity_Type_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: HUNUM

 $Attribute_Definition:$

An identifier that links records in the SOC_DAT data table to records in the SOC_LUT data table. HUNUM values of 0 are holes in the polygon and do not contain information.

Attribute_Definition_Source: NOAA

Attribute Domain Values:

Range_Domain:

Range_Domain_Minimum: 72000001 Range_Domain_Maximum: 72000067

Attribute:

Attribute Label: TYPE

Attribute_Definition: Identifies the feature type Attribute_Definition_Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: AIRPORT

Enumerated Domain Value Definition: AIRPORT

Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain:

```
Enumerated Domain Value: BOAT RAMP
                  Enumerated Domain Value Definition: BOAT RAMP
                  Enumerated Domain Value Definition Source: Research Planning, Inc
            Enumerated Domain:
                  Enumerated Domain Value: COAST GUARD
                  Enumerated_Domain_Value_Definition: COAST GUARD
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
            Enumerated Domain:
                  Enumerated Domain Value: MARINA
                  Enumerated Domain Value Definition: MARINA
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
            Enumerated Domain:
                  Enumerated Domain Value: MINING
                  Enumerated Domain Value Definition: MINE SITE
                  Enumerated Domain Value Definition Source: Research Planning, Inc
            Enumerated Domain:
                  Enumerated Domain Value: WILDLIFE REFUGE
                  Enumerated Domain Value Definition: WILDLIFE REFUGE
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: NAME
      Attribute Definition: The feature name
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: Any character
                  Enumerated Domain Value Definition: Free text
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: CONTACT
      Attribute Definition: Contact person or entity
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: Any character
                  Enumerated Domain Value Definition: Free text
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: PHONE
      Attribute Definition: Contact telephone number
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                  Enumerated Domain Value: Any character
                  Enumerated Domain Value Definition: Free text
                  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: G_SOURCE
      Attribute Definition:
            Geographic source integer identifier that links records in the SOC_DAT data table to records in the SOURCES
            data table.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Range Domain:
                  Range Domain Minimum: 1
                  Range Domain Maximum: N
Attribute:
      Attribute Label: A_SOURCE
      Attribute Definition:
            Attribute source integer identifier that links records in the SOC_DAT data table to records in the SOURCES
            data table.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Range Domain:
                  Range Domain Minimum: 1
                  Range Domain Maximum: N
```

```
Entity Type:
      Entity Type Label: SOURCES
      Entity Type Definition:
            The data table SOURCES contains the primary sources used to create the ESI data set. See the Browse_Graphic
            section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute
            tables in the ESI data structure.
      Entity_Type_Definition_Source: Research Planning, Inc.
Attribute:
      Attribute Label: SOURCE_ID
      Attribute Definition:
            Source identifier that links records in the SOURCES data table to the items G_SOURCE and A_SOURCE in the
            SOC_DAT table, and to G_SOURCE and S_SOURCE in the BIORES table.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Range Domain:
                   Range Domain Minimum: 1
                   Range Domain Maximum: N
Attribute:
      Attribute Label: ORIGINATOR
      Attribute Definition: Author or developer of source material or data set
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: Any character
                   Enumerated Domain Value Definition: Free text
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: DATE_PUB
      Attribute Definition:
            Date of source material, publication, or date of personal communication with expert source
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: Numeric
                   Enumerated Domain Value Definition: mmyyyy
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: TITLE
      Attribute Definition: Title of source material or data
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: Any character
                   Enumerated Domain Value Definition: Free text
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: DATA FORMAT
      Attribute Definition: The format of the source material
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: Any character
                   Enumerated Domain Value Definition: Free text
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: PUBLICATION
      Attribute Definition: Additional citation information
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: Any character
                   Enumerated Domain Value Definition: Free text
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: SCALE
      Attribute Definition: Scale denominator of the source
```

Attribute Definition Source: Research Planning, Inc.

Enumerated Domain Value: integer

Enumerated Domain Value Definition: Any integer

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: TIME PERIOD

Attribute Definition:

Date(s) of data collection that the source material is based upon.

Attribute Definition Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated Domain:

Enumerated_Domain_Value: Numeric

Enumerated_Domain_Value_Definition: yyyy

Enumerated Domain Value Definition Source: Research Planning, Inc.

Distribution Information:

Distributor:

Contact Information:

Contact Person Primary:

Contact Person: John Kaperick

Contact Organization: NOAA, Office of Response and Restoration

Contact Address:

Address_Type: Physical Address Address: 7600 Sand Point Way, N.E.

City: Seattle

State_or_Province: Washington Postal Code: 98115-6349

Contact_Voice_Telephone: (206) 526-6400 Contact_Facsimile_Telephone: (206) 526-6329

Resource_Description: ESI Atlas for the Aleutian Islands

Distribution Liability:

Although these data have been processed successfully on a computer system at the National Oceanic and Atmospheric Administration, no warranty, expressed or implied, is made by NOAA regarding the utility of the data on any other system, nor shall the act of distribution constitute any such warranty. NOAA warrants the delivery of this product in computer-readable format, and will offer a replacement copy of the product when the product is determined unreadable by computer-input peripherals, or when the physical medium is delivered in damaged condition.

Custom Order Process:

Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to a wider community of GIS/mapping users. Distribution formats include ARC export, MOSS and Shape files, and MARPLOT map folders. An ArcView ESI project and ESI_Viewer product are also included on the distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

```
Metadata Reference Information:
```

Metadata Date: 200205

Metadata Review Date: 200205

Metadata Contact:

Contact Information:

Contact Person Primary:

Contact Person: Jill Petersen

Contact Organization: NOAA, Office of Response and Restoration

Contact_Position: GIS Manager

Contact Address:

Address_Type: Physical Address Address: 7600 Sand Point Way, N.E.

City: Seattle

State_or_Province: Washington Postal Code: 98115-6349

Contact_Voice_Telephone: (206) 526-6944

Contact_Facsimile_Telephone: (206) 526-6329

Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov

Metadata Standard Name: Content Standards for Digital Geospatial Metadata

Generated by mp version 2.7.23 on Thu May 16 15:45:45 2002

Aleutian Islands Coastal Resources Inventory and Environmental Sensitivity Maps: SOCECON (Socioeconomic Resource Points and Lines)

Metadata also available as - [Parseable text] - [SGML]

Metadata:

- Identification Information
- Data Quality Information
- Spatial Data Organization Information
- Spatial Reference Information
- Entity and Attribute Information
- <u>Distribution_Information</u>
- Metadata Reference Information

Identification Information:

Citation:

Citation Information:

Originator:

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Prince William Sound Oil Spill Recovery Institute; Aleutians West Coastal Resource Service Area (CRSA); Aleutians East Borough; Alaska Chadux Corporation; United States Coast Guard; and National Fish & Wildlife Foundation.

Publication Date: 200205

Title:

Aleutian Islands Coastal Resources Inventory and Environmental Sensitivity Maps: SOCECON (Socioeconomic Resource Points and Lines)

Edition: First

Geospatial Data Presentation Form: Digital vector data

Series Information:

Series_Name: None

Issue Identification: Aleutian Islands

Publication Information:

Publication Place: Seattle, Washington

Publisher:

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington

Other Citation Details:

Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Prince William Sound Oil Spill Recovery Institute; Aleutians West Coastal Resource Service Area (CRSA); Aleutians East Borough; Alaska Chadux Corporation; United States Coast Guard; and National Fish & Wildlife Foundation.

Description:

Abstract:

This data set contains human-use resource data for Coastal Resource Service Area (CRSA) boundaries, mineral sites, airports, boat ramps, marinas, and Coast Guard stations in the Aleutian Islands, Alaska. Vector points and lines in this data set represent human-use site locations and boundaries. Location-specific type and source information is stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for Aleutians East Borough and Aleutians West CRSA. These data identify the marine and coastal environments and wildlife. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources. See also the MGT (Management Area Polygons) data layer, part of the larger Aleutians East/Aleutians West ESI database, for additional human-use information.

Purpose.

The ESI data were collected, mapped, and digitized to provide environmental data for oil spill planning and response. The Clean Water Act with amendments by the Oil Pollution Act of 1990 requires response plans for immediate and effective protection of sensitive resources.

Time_Period_of_Content:

Time Period Information:

Range_of_Dates/Times:

Beginning_Date: 2000

Ending Date: 2001

Currentness Reference:

These data were compiled during 2000-2001. The currentness dates for these data range from 1995 to 2001 and are documented in the Source Information section.

Status:

Progress: Complete

Maintenance and Update Frequency: None Scheduled

Spatial Domain:

Bounding Coordinates:

West_Bounding_Coordinate: 172.42000 East_Bounding_Coordinate: -158.81002 North_Bounding_Coordinate: 58.133120 South Bounding_Coordinate: 48.351629

Keywords:

Theme:

Theme_Keyword_Thesaurus: None

Theme Keyword: ESI

Theme_Keyword: Sensitivity maps Theme_Keyword: Coastal resources Theme_Keyword: Oil spill planning

Theme_Keyword: Coastal Zone Management

Theme_Keyword: Wildlife Theme_Keyword: Socioeconomic

Place:

Place_Keyword_Thesaurus: None Place Keyword: Aleutian Islands

Access Constraints: None

Use Constraints:

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

Browse Graphic:

Browse_Graphic_File_Name: datafig.jpg Browse Graphic File Description:

Relationships between spatial data layers and attribute data tables for the Aleutian Islands ESI data.

Browse Graphic File Type: JPEG

Data Set Credit:

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Prince William Sound Oil Spill Recovery Institute; Aleutians West Coastal Resource Service Area (CRSA); Aleutians East Borough; Alaska Chadux Corporation; United States Coast Guard; and National Fish & Wildlife Foundation.

Native_Data_Set_Environment:

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.0.2) and ORACLE(r) RDBMS (version 8.0.5.0.0). The hardware configuration is Hewlett Packard workstations (models 715/50 and 712/80i) with UNIX operating system (HP-UX Release A.10.20), and PC's with Windows Operating System (NT4.0/2000). The Spatial_Data_Organization Information section refers only to the source files in the ARC export format. The following files are included in that data set: birds.e00, bio_lut.e00, biofile.e00, biores.e00, breed_e00, breed_dt.e00, esi.e00, faults.e00, fish.e00, fishl.e00, geo.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, m_mampt.e00, mgt.e00, nests.e00, seasonal.e00, soc_dat.e00, soc_lut.e00, socecon.e00, sources.e00, species.e00, status.e00, volcanos.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biofile, biores, breed_dt, seasonal, soc_dat, soc_lut, socecon, sources, species, and status.

Data Quality Information:

Attribute Accuracy:

Attribute Accuracy Report:

A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.

Logical Consistency Report:

A multi-stage error checking process, described in the above Attribute_Accuracy_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary node, etc.), and ORACLE(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks.

Completeness Report:

These data represent a synthesis of expert knowledge, available hardcopy documents, and digital data on mineral resources, airports, boat ramps, Coast Guard Stations, and marinas. Refer to the MGT (Management Area Polygons) data layer for additional human-use information. These data do not represent all human-use sites in Aleutians East Borough and Aleutians West Coastal Resource Service Area.

Positional Accuracy:

Horizontal Positional Accuracy:

Horizontal Positional Accuracy_Report:

The spatial components of the SOCECON data sets are developed from pre-existing digital and hardcopy sources and regional experts. It is difficult to estimate the positional accuracy of such data, except to state that hardcopy data were compiled on basemaps with a scale of 1:250,000. See the Lineage and Process_Description sections for more information on the original data source and how these data were integrated or manipulated to create the final data set.

Lineage:

```
Source Information:
```

Source Citation:

Citation Information:

Originator: Mary Stadum

Publication Date: Unpublished material

Title: Personal Communication

Geospatial Data Presentation Form: Hardcopy Map

Source_Scale_Denominator: 500000

Type_of_Source_Media: Paper

Source_Time_Period_of_Content:

Time_Period_Information:

Single_Date/Time:

Calendar Date: 2000

Source Currentness Reference: Date of Communication

Source_Citation_Abbreviation: None

Source Contribution: Socioeconomic information

Source_Information:

Source Citation:

Citation Information:

Originator: Alaska Department of Natural Resources

Publication Date: Unpublished material

Title: Alaska Airports and Runways

Geospatial Data Presentation Form: Hardcopy Map

Type of Source Media: Electronic mail service

Source_Time Period of Content:

 \overline{T} ime \overline{P} eriod \overline{I} nformation:

Single_Date/Time:

Calendar Date: 1995

Source_Currentness_Reference: Date of study

Source_Citation_Abbreviation: None

Source Contribution: Socioeconomic information

Source_Information:

Source Citation:

Citation Information:

Originator: Sharon Boyett

Publication_Date: Unpublished material

Title: Personal Communication

Geospatial Data Presentation Form: Hardcopy Map

Source Scale Denominator: 250000

Type of Source Media: Paper

Source Time Period of Content:

Time Period Information:

Single Date/Time:

Calendar_Date: 2001

Source Currentness Reference: Date of Communication

Source_Citation_Abbreviation: None

Source Contribution: Socioeconomic information

Process Step:

Process_Description:

Several data sources were used to depict human-use resources for this data layer: Alaska Dept. of Natural Resources, overflight observations, local expert knowledge, and CRSA Management Plan. Digital positional data were used exactly as provided, and the attribute data were converted to a format compatible with the ESI data format. Hardcopy data and local knowledge data were digitized off of 1:250,000 scale basemaps. Resource agencies confirmed the accuracy of the boundaries during review.

Process_Date: 200111 Process Contact:

Contact Information:

Contact Organization Primary:

Contact Organization: NOAA, Office of Response and Restoration

Contact Person: Jill Petersen

Contact Address:

Address_Type: Physical address Address: 7600 Sand Point Way, N.E.

City: Seattle

State_or_Province: Washington Postal Code: 98115-6349

Contact_Voice_Telephone: (206) 526-6944 Contact Facsimile Telephone: (206) 526-6329

Contact Electronic Mail Address: Jill.Petersen@noaa.gov

Spatial Data Organization Information:

Direct_Spatial_Reference_Method: Vector

Point_and_Vector_Object_Information:

SDTS Terms Description:

SDTS Point and Vector Object Type: Complete chain

Point and Vector Object Count: 3

SDTS_Terms_Description:

SDTS Point_and_Vector_Object_Type: Link

Point_and_Vector_Object_Count: 36

SDTS Terms Description:

SDTS_Point_and_Vector_Object_Type: Entity Point

Point_and_Vector_Object_Count: 233

SDTS Terms Description:

SDTS_Point_and_Vector_Object_Type: Node, planar graph

Point and Vector Object Count: 6

Spatial Reference Information:

Horizontal Coordinate System Definition:

Geographic:

Latitude_Resolution: 0.00005 Longitude Resolution: 0.00005

Geographic_Coordinate_Units: Decimal degrees

Geodetic Model:

Horizontal Datum Name: North American Datum of 1927

Ellipsoid_Name: Clark 1866 Semi-major Axis: 6378206.4

Denominator_of_Flattening_Ratio: 294.978698

Entity and Attribute Information:

Overview Description:

Entity and Attribute Overview:

In addition to the geographic data layers, two relational attribute or data tables, SOC_DAT and SOURCES, are used to store the complex socioeconomic data in the ESI data structure. The geographic data layer containing socioeconomic resource information (in this case, SOCECON) is linked to the Socioeconomic Resources table (SOC_DAT) using the unique ID and the lookup table SOC_LUT, or it can be linked directly using HUNUM. HUNUM is a unique reference number concatenated with the atlas number (the atlas number for the Aleutian Islands atlas is 72). ID is a unique combination of the atlas number (72), an element-specific number (SOCECON = 10) and a unique record number. SOC_DAT and the other relational data tables are described below in detail. See the Browse_Graphic section for a link

to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure.

```
Detailed_Description:
```

Entity_Type:

Entity Type Label: SOCECON.AAT

Entity Type Definition:

The SOCECON.AAT table contains attribute information for the lines representing CRSA boundaries. Note that all attribute information is stored in a series of relational files, described below. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure

Entity Type Definition Source: Research Planning, Inc.

Attribute:

Attribute_Label: TYPE Attribute_Definition:

The human-use features depicted on the maps are those that could be impacted by an oil spill or could provide access for response operations

Attribute_Definition_Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: AB

Enumerated_Domain_Value_Definition: BOROUGH BOUNDARY

Enumerated Domain Value Definition Source: Research Planning, Inc.

Detailed Description:

Entity Type:

Entity Type Label: SOCECON.PAT

Entity Type Definition:

The SOCECON.PAT table contains attribute information for the vector points representing mineral sites, airports, boat ramps, marinas, and Coast Guard stations. Note that all attribute information is stored in a series of relational files, described below. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure

Entity Type Definition Source: Research Planning, Inc.

Attribute:

Attribute_Label: TYPE Attribute Definition:

The human-use features depicted on the maps are those that could be impacted by an oil spill or could provide access for response operations

Attribute_Definition_Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: A

Enumerated_Domain_Value_Definition: AIRPORT

Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain:

Enumerated_Domain_Value: BR

Enumerated Domain Value Definition: BOATRAMP

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc

Enumerated Domain:

Enumerated_Domain_Value: CG

 ${\it Enumerated_Domain_Value_Definition:} \ \ {\it COAST} \ {\it GUARD}$

Enumerated Domain Value Definition Source: Research Planning, Inc

Enumerated_Domain:

Enumerated Domain Value: M

Enumerated_Domain_Value_Definition: MARINA

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc

Enumerated Domain:

Enumerated Domain Value: M2

Enumerated Domain Value Definition: MINE SITE

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc

Attribute:

Attribute_Label: ID

Attribute Definition:

An identifier that links vector objects in the human-use data layers to records in the SOC_LUT data table. ID is a concatenation of atlas number (72), element number (10), and record number.

Attribute_Definition_Source: NOAA

Attribute Domain Values:

Range_Domain:

Range_Domain_Minimum: 721000001 Range_Domain_Maximum: 721000233

```
Environmental Sensitivity Maps: SOCECON (Socioeconomic
      Attribute:
             Attribute Label: HUNUM
             Attribute Definition: An identifier that links directly to the SOC DAT table.
             Attribute Definition Source: NOAA
             Attribute Domain Values:
                   Range Domain:
                          Range Domain Minimum: 72000056
                          Range Domain Maximum: 72000067
Detailed Description:
      Entity Type:
             Entity Type Label: SOC_LUT
             Entity Type Definition:
                   The data table SOC_LUT is a lookup table that contains items necessary for linking vector objects in the
                   human-use data layers with the SOC_DAT data table. See the Browse_Graphic section for a link to the
                   entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data
                   structure.
             Entity Type Definition Source: Research Planning, Inc.
      Attribute:
             Attribute Label: HUNUM
             Attribute Definition:
                   An identifier that links records in the SOC LUT data table to records in the SOC DAT data table. HUNUM
                   values of 0 are holes in polygons and do not contain information.
             Attribute Definition Source: NOAA
             Attribute Domain Values:
                   Range Domain:
                          Range Domain Minimum: 72000001
                          Range Domain Maximum: 72000067
      Attribute:
             Attribute Label: ID
             Attribute Definition:
                   An identifier that links vector objects in the human-use data layers to records in the SOC_LUT data table. ID is
                   a concatenation of atlas number (72), element number (10), and record number. ID values of 9999 are holes in
                   polygons and do not contain information.
             Attribute Definition Source: NOAA
             Attribute Domain Values:
                   Range Domain:
                          Range Domain Minimum: 721000001
                          Range Domain Maximum: 721100019
Detailed Description:
      Entity Type:
             Entity Type Label: SOC_DAT
             Entity Type Definition:
                   The data table SOC DAT contains both human-use attribute data and items necessary for linking the human-use
                   spatial data layers to the SOURCES data table. See the Browse Graphic section for a link to the
                   entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data
             Entity Type Definition Source: Research Planning, Inc.
      Attribute:
             Attribute Label: HUNUM
             Attribute Definition:
                    An identifier that links records in the SOC DAT data table to records in the SOC LUT data table.
             Attribute Definition Source: NOAA
             Attribute Domain Values:
                   Range Domain:
                          Range Domain Minimum: 72000001
                          Range Domain Maximum: 72000067
      Attribute:
             Attribute Label: TYPE
             Attribute Definition: Identifies the feature type
             Attribute Definition Source: Research Planning, Inc.
             Attribute Domain Values:
                   Enumerated Domain:
                          Enumerated Domain Value: AIRPORT
                          Enumerated Domain Value Definition: AIRPORT
```

Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain Value: BOAT RAMP

Enumerated Domain:

```
Enumerated Domain Value Definition: BOAT RAMP
                        Enumerated Domain Value Definition Source: Research Planning, Inc
                  Enumerated Domain:
                         Enumerated Domain Value: COAST GUARD
                         Enumerated Domain Value Definition: COAST GUARD
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
                  Enumerated Domain:
                         Enumerated Domain Value: MARINA
                         Enumerated Domain Value Definition: MARINA
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
                  Enumerated Domain:
                         Enumerated Domain Value: MINING
                         Enumerated Domain Value Definition: MINE SITE
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
                  Enumerated Domain:
                         Enumerated Domain Value: WILDLIFE REFUGE
                         Enumerated Domain Value Definition: WILDLIFE REFUGE
                         Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: NAME
            Attribute Definition: The feature name
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                  Enumerated Domain:
                         Enumerated Domain Value: Any character
                         Enumerated Domain Value Definition: Free text
                        Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: CONTACT
            Attribute Definition: Contact person or entity
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                  Enumerated Domain:
                         Enumerated Domain Value: Any character
                         Enumerated Domain Value Definition: Free text
                        Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: PHONE
            Attribute Definition: Contact telephone number
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                  Enumerated Domain:
                         Enumerated Domain Value: Any character
                         Enumerated Domain Value Definition: Free text
                        Enumerated Domain Value Definition Source: Research Planning, Inc.
      Attribute:
            Attribute Label: G_SOURCE
            Attribute Definition:
                  Geographic source integer identifier that links records in the SOC_DAT data table to records in the SOURCES
                  data table.
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                  Range Domain:
                         Range Domain Minimum: 1
                        Range Domain Maximum: N
      Attribute:
            Attribute Label: A_SOURCE
            Attribute Definition:
                  Attribute source integer identifier that links records in the SOC DAT data table to records in the SOURCES
            Attribute Definition Source: Research Planning, Inc.
            Attribute Domain Values:
                  Range Domain:
                        Range Domain Minimum: 1
                        Range Domain Maximum: N
Detailed Description:
      Entity Type:
```

```
Entity Type Label: SOURCES
      Entity Type Definition:
            The data table SOURCES contains the primary sources used to create the ESI data set. See the Browse Graphic
            section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute
            tables in the ESI data structure.
      Entity Type Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: SOURCE_ID
      Attribute Definition:
            Source identifier that links records in the SOURCES data table to the items G_SOURCE and A_SOURCE in the
            SOC_DAT table, and to G_SOURCE and S_SOURCE in the BIORES table.
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Range Domain:
                   Range Domain Minimum: 1
                   Range Domain Maximum: N
Attribute:
      Attribute Label: ORIGINATOR
      Attribute Definition: Author or developer of source material or data set
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: Any character
                   Enumerated Domain Value Definition: Free text
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: DATE_PUB
      Attribute Definition:
            Date of source material, publication, or date of personal communication with expert source
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: Numeric
                   Enumerated Domain Value Definition: mmyyyy
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: TITLE
      Attribute Definition: Title of source material or data
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: Any character
                   Enumerated Domain Value Definition: Free text
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: DATA_FORMAT
      Attribute Definition: The format of the source material
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: Any character
                   Enumerated Domain Value Definition: Free text
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: PUBLICATION
      Attribute Definition: Additional citation information
      Attribute Definition Source: Research Planning, Inc.
      Attribute Domain Values:
            Enumerated Domain:
                   Enumerated Domain Value: Any character
                   Enumerated Domain Value Definition: Free text
                   Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
      Attribute Label: SCALE
      Attribute Definition: Scale denominator of the source
      Attribute Definition Source: Research Planning, Inc.
```

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: integer

Enumerated Domain Value Definition: Any integer

Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: TIME_PERIOD

Attribute Definition:

Date(s) of data collection that the source material is based upon.

Attribute Definition Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated Domain:

Enumerated_Domain_Value: Numeric

Enumerated_Domain_Value_Definition: yyyy

Enumerated Domain Value Definition Source: Research Planning, Inc.

Distribution Information:

Distributor:

Contact Information:

Contact Person Primary:

Contact Person: John Kaperick

Contact Organization: NOAA, Office of Response and Restoration

Contact Address:

Address_Type: Physical Address Address: 7600 Sand Point Way, N.E.

City: Seattle

State_or_Province: Washington Postal Code: 98115-6349

Contact_Voice_Telephone: (206) 526-6400 Contact Facsimile Telephone: (206) 526-6329

Resource Description: ESI Atlas for the Aleutian Islands

Distribution Liability:

Although these data have been processed successfully on a computer system at the National Oceanic and Atmospheric Administration, no warranty, expressed or implied, is made by NOAA regarding the utility of the data on any other system, nor shall the act of distribution constitute any such warranty. NOAA warrants the delivery of this product in computer-readable format, and will offer a replacement copy of the product when the product is determined unreadable by computer-input peripherals, or when the physical medium is delivered in damaged condition.

Custom_Order_Process:

Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to a wider community of GIS/mapping users. Distribution formats include ARC export, MOSS and Shape files, and MARPLOT map folders. An ArcView ESI project and ESI_Viewer product are also included on the distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

Metadata Reference Information:

Metadata Date: 200205

Metadata_Review_Date: 200205

Metadata Contact:

Contact Information:

Contact Person Primary:

Contact Person: Jill Petersen

Contact Organization: NOAA, Office of Response and Restoration

Contact Position: GIS Manager

Contact Address:

Address_Type: Physical Address Address: 7600 Sand Point Way, N.E.

City: Seattle

State_or_Province: Washington Postal Code: 98115-6349

Contact_Voice_Telephone: (206) 526-6944 Contact Facsimile Telephone: (206) 526-6329

Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov Metadata Standard Name: Content Standards for Digital Geospatial Metadata

Metadata Standard Version: FGDC-STD-001-1998

Generated by mp version 2.7.23 on Thu May 16 15:48:41 2002

Aleutian Islands Coastal Resources Inventory and Environmental Sensitivity Maps: FAULTS (Fault Lines)

Metadata also available as - [Parseable text] - [SGML]

Metadata:

- Identification Information
- Data Quality Information
- Spatial Data Organization Information
- Spatial Reference Information
- Entity and Attribute Information
- <u>Distribution Information</u>
- Metadata Reference Information

Identification Information:

Citation:

Citation Information:

Originator:

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Prince William Sound Oil Spill Recovery Institute; Aleutians West Coastal Resource Service Area (CRSA); Aleutians East Borough; Alaska Chadux Corporation; United States Coast Guard; and National Fish & Wildlife Foundation.

Publication Date: 200205

Title:

Aleutian Islands Coastal Resources Inventory and Environmental Sensitivity Maps: FAULTS (Fault Lines)

Edition: First

Geospatial Data Presentation Form: Digital vector data

Series Information:

Series Name: None

Issue Identification: Aleutian Islands

Publication Information:

Publication_Place: Seattle, Washington

Publisher:

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington

 $Other_Citation_Details:$

Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Prince William Sound Oil Spill Recovery Institute; Aleutians West Coastal Resource Service Area (CRSA); Aleutians East Borough; Alaska Chadux Corporation; United States Coast Guard; and National Fish & Wildlife Foundation.

Description:

Abstract:

This data set is a compilation of faults mapped by the United States Geological Survey (USGS) and published in USGS bulletin series 1028 (1956-1971). These bulletins are the last published attempt at mapping structure and stratigraphy of the Aleutians on an island-by-island basis. Only faults that manifest themselves on land were included in the USGS reports. Faults were transcribed from these bulletins onto the ESI maps. On the ESI maps, the faults are portrayed as linear features, with no map indication of their type (normal vs. thrust). This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for Aleutians East Borough and Aleutians West Coastal Resource Service Area (CRSA). These data identify the marine and coastal environments and wildlife. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources.

Purpose:

The fault data were collected, mapped, and digitized as part of a general assessment of the geophysical hazards present on the Aleutians and the Alaskan Peninsula.

Time Period of Content:

Time Period Information:

Range of Dates/Times:

Beginning_Date: 2000 Ending Date: 2001

Currentness Reference:

The currentness dates for these data range from 1955 to 1971 and are documented in the Source Information section.

Status:

Progress: Complete

Maintenance and Update Frequency: None Scheduled

Spatial Domain:

Bounding Coordinates:

West_Bounding_Coordinate: 172.42000 East_Bounding_Coordinate: -158.81002 North_Bounding_Coordinate: 58.133120 South Bounding_Coordinate: 48.351629

Keywords:

Theme:

Theme Keyword Thesaurus: None

Theme Keyword: ESI

Theme_Keyword: Sensitivity maps Theme_Keyword: Coastal resources Theme Keyword: Oil spill planning

Theme Keyword: Coastal Zone Management

Theme_Keyword: Geology Theme Keyword: Faults

Place:

Place Keyword Thesaurus: None Place Keyword: Aleutian Islands

Access Constraints: None

 $Use_Constraints:$

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

Browse Graphic:

Browse_Graphic_File_Name: datafig.jpg Browse Graphic File Description:

Relationships between spatial data layers and attribute data tables for the Aleutian Islands ESI data.

Browse_Graphic_File_Type: JPEG

Data Set Credit:

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Prince William Sound Oil Spill Recovery Institute; Aleutians West Coastal Resource Service Area (CRSA); Aleutians East Borough; Alaska Chadux Corporation; United States Coast Guard; and National Fish & Wildlife Foundation.

Native Data Set Environment:

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.0.2) and ORACLE(r) RDBMS (version 8.0.5.0.0). The hardware configuration is Hewlett Packard workstations (models 715/50 and 712/80i) with UNIX operating system (HP-UX Release A.10.20), and PC's with Windows Operating System (NT4.0/2000). The Spatial_Data_Organization Information section refers only to the source files in the ARC export format. The following files are included in that data set: birds.e00, bio_lut.e00, biofile.e00, biores.e00, breed_e00, breed_dt.e00, esi.e00, faults.e00, fishl.e00, geo.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, mgt.e00, nests.e00, seasonal.e00, soc_dat.e00, soc_lut.e00, socecon.e00, sources.e00, species.e00, status.e00, volcanos.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biofile, biores, breed_dt, seasonal, soc_dat, soc_lut, socecon, sources, species, and status.

Data Quality Information:

Attribute Accuracy:

Attribute Accuracy_Report:

A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.

Logical Consistency Report:

A multi-stage error checking process, described in the above Attribute_Accuracy_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary node, etc.), and ORACLE(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where

the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks.

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Completeness Report:
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These data represent a synthesis of expert knowledge and available hardcopy reports on mapped faults in the Aleutian chain. Faults presented in U. S. Geological Survey (USGS) reports as "speculative" (dotted lines with question marks) were not included.

Positional Accuracy:

Horizontal Positional_Accuracy:

Horizontal Positional Accuracy Report:

The positional accuracy of the faults portrayed on the maps is difficult to estimate, except to state that they are compiled on hardcopy basemaps at a scale of 1:250,000 and 1:63,360 (in the case of Unalaska). The scales at which the faults were originally mapped in the USGS reports varied from 1:25,000 to 1:250,000. For the most part, the USGS reports are the result of field reconnaissance mapping techniques, and the fault data included on the ESI maps reflect the positional accuracy of these original data. See the Lineage and Process_Description sections for more information on the original data source and how these data were integrated or manipulated to create the final data set.

Lineage:

Source Information:

Source Citation:

Citation Information:

Originator: F.M. Byers Publication Date: 1959

Title:

Geology of Umnak and Bogoslof Islands, Aleutians Is., AK, Investigations of Alaskan Volcanoes

Geospatial Data Presentation Form: Hardcopy Map

Publication Information:

Publication Place: Washington, D.C.

Publisher: U.S. Government Printing Office

Source Scale Denominator: 300000 Type of Source Media: Paper

Source Time Period of Content:

Time Period Information:

Single Date/Time:

Calendar Date: 1959

Source Currentness Reference: Date of Survey

Source Citation Abbreviation: None

Source Contribution: Fault information

Source Information:

Source Citation:

Citation Information:

Originator: Coats, R.R.

Publication Date: 1959

Title:

Geologic Reconnaissance of Gareloi Island, Aleutians Is., AK, Investigations of Alaskan

Volcanoes

Geospatial Data Presentation Form: Hardcopy Map

Publication Information:

Publication Place: Washington, D.C.

Publisher: U.S. Government Printing Office

Source Scale Denominator: 48738 Type of Source Media: Paper

Source Time Period of Content:

 \overline{T} ime \overline{P} eriod \overline{I} nformation:

Single Date/Time:

-Calendar Date: 1959

Source Currentness Reference: Date of Survey

Source Citation Abbreviation: None

Source Contribution: Fault information

Source Information:

Source Citation:

Citation Information:

Originator: Coats, R.R.

Publication Date: 1959

Title:

Geologic Reconnaissance of Semisopochnoi Island, Aleutians Is., AK, Investigations of Alaskan Volcanoes

Geospatial Data Presentation Form: Hardcopy Map

Publication Information:

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Publication Place: Washington, D.C.
                          Publisher: U.S. Government Printing Office
      Source Scale Denominator: 25000
      Type of Source Media: Paper
      Source Time Period of Content:
             \overline{T}ime\overline{P}eriod\overline{I}nformation:
                   Single Date/Time:
                          Calendar Date: 1959
             Source Currentness Reference: Date of Survey
      Source Citation Abbreviation: None
      Source Contribution: Fault Information
Source Information:
      Source Citation:
             Citation Information:
                    Originator: Coats, R.R.
                    Publication Date: 1956
                    Title:
                          Geologic Reconnaissance of Northern Kanaga Island, Aleutians Is., AK, Investigations of Alaskan
                          Volcanoes
                    Geospatial Data Presentation Form: Hardcopy Map
                    Publication Information:
                          Publication Place: Washington, D.C.
                          Publisher: U.S. Government Printing Office
      Source Scale Denominator: 25000
      Type of Source Media: Paper
      Source Time Period of Content:
             Time Period_Information:
                    Single Date/Time:
                          Calendar_Date: 1956
             Source Currentness Reference: Date of Survey
      Source Citation Abbreviation: None
      Source Contribution: Fault Information
Source Information:
      Source Citation:
             Citation Information:
                    Originator: Coats, R.R. et al.
                    Publication Date: 1961
                    Title:
                          Geologic Reconnaissance of Kiska Island, Aleutians Is., AK, Investigations of Alaskan Volcanoes
                    Geospatial Data Presentation Form: Hardcopy Map
                    Publication Information:
                          Publication Place: Washington, D.C.
                          Publisher: U.S. Government Printing Office
      Source Scale Denominator: 63360
      Type of Source Media: Paper
      Source Time Period of Content:
             \overline{T}ime \overline{P}eriod \overline{I}nformation:
                    Single Date/Time:
                          Calendar Date: 1961
             Source Currentness Reference: Date of Survey
      Source Citation Abbreviation: None
      Source Contribution: Fault Information
Source Information:
      Source Citation:
             Citation Information:
                    Originator: Drewes, H. et al.
                    Publication Date: 1961
                    Title:
                          Geology of Unalaska Island and Adjacent Insular Shelf, Aleutians Is., AK, Investigations of
                          Alaskan Volcanoes
                    Geospatial Data Presentation Form: Hardcopy Map
                    Publication Information:
                          Publication Place: Washington, D.C.
                          Publisher: U.S. Government Printing Office
      Source Scale Denominator: 250000
      Type of Source Media: Paper
      Source Time Period of Content:
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Time Period Information:
                   Single Date/Time:
                          Calendar Date: 1961
             Source Currentness Reference: Date of Survey
      Source Citation Abbreviation: None
      Source Contribution: Fault Information
Source_Information:
      Source Citation:
             Citation Information:
                   Originator: Fraser, G.D. and H.F. Barnett
                   Publication Date: 1959
                   Title:
                          Geology of the Delarof and Westernmost Andreanoff Islands, Aleutians Is., AK, Investigations of
                          Alaskan Volcanoes
                   Geospatial Data Presentation Form: Hardcopy Map
                   Publication Information:
                          Publication Place: Washington, D.C.
                          Publisher: U.S. Government Printing Office
      Source Scale Denominator: 25000
      Type of Source Media: Paper
      Source Time Period of Content:
             Time Period Information:
                   Single Date/Time:
                          Calendar Date: 1959
             Source Currentness Reference: Date of Survey
      Source Citation Abbreviation: None
      Source Contribution: Fault Information
Source Information:
      Source Citation:
             Citation Information:
                   Originator: Fraser, G.D. and G.L. Snyder
                   Publication Date: 1959
                   Title:
                          Geology of Southern Adak Island and Kagalaska Island, Aleutians Is., AK, Investigations of
                          Alaskan Volcanoes
                   Geospatial Data Presentation Form: Hardcopy Map
                   Publication Information:
                          Publication Place: Washington, D.C.
                          Publisher: U.S. Government Printing Office
      Source Scale Denominator: 25000
      Type_of_Source_Media: Paper
      Source Time Period of Content:
             \overline{T}ime \overline{P}eriod \overline{I}nformation:
                   Single Date/Time:
                          Calendar Date: 1959
             Source Currentness Reference: Date of Survey
      Source Citation Abbreviation: None
      Source Contribution: Fault Information
Source Information:
      Source Citation:
             Citation Information:
                   Originator: Lewis, R.Q. et al.
                   Publication Date: 1960
                   Title:
                          Geology of Rat Island, Aleutians Is., AK, Investigations of Alaskan Volcanoes
                   Geospatial Data Presentation Form: Hardcopy Map
                   Publication Information:
                          Publication Place: Washington, D.C.
                          Publisher: U.S. Government Printing Office
      Source Scale Denominator: 63360
      Type_of_Source_Media: Paper
      Source Time Period of Content:
             Time Period Information:
                   Single_Date/Time:
                          Calendar Date: 1960
             Source Currentness Reference: Date of Survey
      Source Citation Abbreviation: None
```

```
Source Contribution: Fault Information
Source Information:
      Source Citation:
             Citation Information:
                   Originator: Nelson, W.H.
                   Publication Date: 1959
                   Title:
                          Geology of Segula, Davidof, and Khvostof Islands, Aleutians Is., AK, Investigations of Alaskan
                          Volcanoes
                   Geospatial Data Presentation Form: Hardcopy Map
                   Publication Information:
                          Publication Place: Washington, D.C.
                          Publisher: U.S. Government Printing Office
      Source Scale Denominator: 25000
      Type of Source Media: Paper
      Source Time Period of Content:
             Time Period Information:
                   Single Date/Time:
                          Calendar Date: 1959
             Source Currentness Reference: Date of Survey
      Source Citation Abbreviation: None
      Source Contribution: Fault Information
Source Information:
      Source Citation:
             Citation Information:
                   Originator: Powers, H.A., R.R. Coats, and W.H. Nelson
                   Publication Date: 1960
                   Title:
                          Geology and Submarine Physiography of Amchitka Island, Aleutians Is., AK, Investigations of
                          Alaskan Volcanoes
                   Geospatial Data Presentation Form: Hardcopy Map
                   Publication Information:
                          Publication Place: Washington, D.C.
                          Publisher: U.S. Government Printing Office
      Source Scale Denominator: 20000
      Type of Source Media: Paper
      Source Time Period of Content:
             \overline{T}ime \overline{P}eriod \overline{I}nformation:
                   Single Date/Time:
                          Calendar Date: 1960
             Source Currentness Reference: Date of Survey
      Source Citation Abbreviation: None
      Source Contribution: Fault Information
Source Information:
      Source Citation:
             Citation Information:
                   Originator: Simons, F.S. and D.E. Mathewson
                   Publication Date: 1955
                   Title:
                          Geology of Great Sitkin Island, Aleutians Is., AK, Investigations of Alaskan Volcanoes
                   Geospatial Data Presentation Form: Hardcopy Map
                   Publication Information:
                          Publication Place: Washington, D.C.
                          Publisher: U.S. Government Printing Office
      Source Scale Denominator: 50000
      Type of Source Media: Paper
      Source Time Period of Content:
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                   Single Date/Time:
                          Calendar Date: 1955
             Source Currentness Reference: Date of Survey
      Source Citation Abbreviation: None
      Source Contribution: Fault Information
Source_Information:
      Source Citation:
             Citation Information:
```

Originator: Snyder, G.L.

```
Publication Date: 1959
                   Title:
                          Geology of Little Sitkin Island, Aleutians Is., AK, Investigations of Alaskan Volcanoes
                   Geospatial Data Presentation Form: Hardcopy Map
                   Publication Information:
                          Publication Place: Washington, D.C.
                          Publisher: U.S. Government Printing Office
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      Type of Source Media: Paper
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             \overline{T}ime \overline{P}eriod \overline{I}nformation:
                   Single Date/Time:
                          Calendar Date: 1959
             Source Currentness Reference: Date of Survey
      Source Citation Abbreviation: None
      Source Contribution: Fault Information
Source Information:
      Source Citation:
             Citation Information:
                   Originator: Waldron, H.H.
                   Publication Date: 1961
                   Title:
                          Geologic Reconnaissance of Frosty Peak Volcano, Aleutians Is., AK, Investigations of Alaskan
                   Geospatial Data Presentation Form: Hardcopy Map
                   Publication Information:
                          Publication Place: Washington, D.C.
                          Publisher: U.S. Government Printing Office
      Source Scale Denominator: 250000
      Type of Source Media: Paper
      Source Time Period of Content:
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                   Single Date/Time:
                         Calendar Date: 1961
             Source Currentness Reference: Date of Survey
      Source Citation Abbreviation: None
      Source Contribution: Fault Information
Source Information:
      Source Citation:
             Citation Information:
                   Originator: Gates, O.H. et al
                   Publication Date: 1971
                   Title:
                          Geology of the Near Islands, Aleutians Is., AK, Investigations of Alaskan Volcanoes
                   Geospatial Data Presentation Form: Hardcopy Map
                   Publication Information:
                          Publication Place: Washington, D.C.
                          Publisher: U.S. Government Printing Office
      Source Scale Denominator: 63360
      Type of Source Media: Paper
      Source Time Period of Content:
             Time_Period_Information:
                   Single Date/Time:
                          Calendar Date: 1971
             Source Currentness Reference: Date of Survey
      Source Citation Abbreviation: None
      Source Contribution: Fault Information
Source Information:
      Source Citation:
             Citation Information:
                   Originator: Kennedy, G.C. and H.H. Waldron
                   Publication Date: 1955
                   Title:
                          Geology of Pavlov Volcano and Vicinity, Aleutians Is., AK, Investigations of Alaskan Volcanoes
                   Geospatial Data Presentation Form: Hardcopy Map
                   Publication Information:
```

Publication Place: Washington, D.C.

Publisher: U.S. Government Printing Office

Source_Scale_Denominator: 100000
Type_of_Source_Media: Paper
Source_Time_Period_of_Content:
 Time_Period_Information:
 Single_Date/Time:

Calendar Date: 1955

Source Currentness Reference: Date of Survey

Source_Citation_Abbreviation: None Source_Contribution: Fault Information

Process Step:

Process_Description:

The main sources of data used to depict fault distribution were U. S. Geological Survey Bulletins 1028A-U (1956-1971). This bulletin series was cited by local experts during initial project interviews. Information pertaining to fault location was taken from hardcopy maps and reports and compiled by hand onto U.S. Geological Survey 1:250,000 and 1:63,360 (in the case of Unalaska) topographic quadrangles. Digital data were not available.

Process_Date: 200111 Process Contact:

Contact Information:

Contact Organization Primary:

Contact Organization: NOAA, Office of Response and Restoration

Contact Person: Jill Petersen

Contact Address:

Address_Type: Physical address Address: 7600 Sand Point Way, N.E.

City: Seattle

State_or_Province: Washington
Postal_Code: 98115-6349

Contact_Voice_Telephone: (206) 526-6944 Contact_Facsimile_Telephone: (206) 526-6329

Contact Electronic Mail Address: Jill.Petersen@noaa.gov

Spatial Data Organization Information:

Direct_Spatial_Reference_Method: Vector

Point and Vector Object Information:

SDTS Terms Description:

SDTS Point and Vector Object Type: Complete chain

Point and Vector Object Count: 41

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: Link

Point and Vector Object Count: 107

SDTS_Terms_Description:

SDTS Point and Vector Object Type: Node, planar graph

Point_and_Vector_Object_Count: 78

Spatial Reference Information:

Horizontal_Coordinate_System_Definition:

Geographic:

Latitude_Resolution: 0.00005 Longitude_Resolution: 0.00005

Geographic Coordinate Units: Decimal degrees

 $Geodetic_Model:$

Horizontal Datum Name: North American Datum of 1927

Ellipsoid_Name: Clark 1866 Semi-major_Axis: 6378206.4

Denominator of Flattening Ratio: 294.978698

Entity and Attribute Information:

Detailed_Description: Entity Type: Entity_Type_Label: FAULTS. AAT

Entity Type Definition:

The FAULTS.AAT table contains attribute information for the vector line data representing faults.

Entity Type Definition Source: Research Planning, Inc.

Distribution Information:

Distributor:

Contact Information:

Contact Person Primary:

Contact Person: John Kaperick

Contact Organization: NOAA, Office of Response and Restoration

Contact Address:

Address_Type: Physical Address Address: 7600 Sand Point Way, N.E.

City: Seattle

State_or_Province: Washington Postal Code: 98115-6349

Contact_Voice_Telephone: (206) 526-6400 Contact_Facsimile_Telephone: (206) 526-6329 Resource Description: ESI Atlas for the Aleutian Islands

Distribution Liability:

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Custom Order Process:

Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to a wider community of GIS/mapping users. Distribution formats include ARC export, MOSS and Shape files, and MARPLOT map folders. An ArcView ESI project and ESI_Viewer product are also included on the distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

Metadata Reference Information:

Metadata Date: 200205

Metadata Review Date: 200205

 $Metadata_Contact:$

Contact Information:

Contact_Person_Primary:

Contact Person: Jill Petersen

Contact_Organization: NOAA, Office of Response and Restoration

Contact Position: GIS Manager

Contact Address:

Address_Type: Physical Address Address: 7600 Sand Point Way, N.E.

City: Seattle

State_or_Province: Washington Postal Code: 98115-6349

Contact_Voice_Telephone: (206) 526-6944 Contact Facsimile Telephone: (206) 526-6329

Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov

Metadata Standard Name: Content Standards for Digital Geospatial Metadata

Metadata_Standard_Version: FGDC-STD-001-1998

Generated by mp version 2.7.23 on Thu May 16 15:55:11 2002

Aleutian Islands Coastal Resources Inventory and Environmental Sensitivity Maps: GEO (Geothermal Activity Points)

Metadata also available as - [Parseable text] - [SGML]

Metadata:

- Identification Information
- Data Quality Information
- Spatial Data Organization Information
- Spatial Reference Information
- Entity and Attribute Information
- Distribution Information
- Metadata_Reference_Information

Identification Information:

Citation:

Citation Information:

Originator:

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Prince William Sound Oil Spill Recovery Institute; Aleutians West Coastal Resource Service Area (CRSA); Aleutians East Borough; Alaska Chadux Corporation; United States Coast Guard; and National Fish & Wildlife Foundation.

Publication Date: 200205

Title:

Aleutian Islands Coastal Resources Inventory and Environmental Sensitivity Maps: GEO (Geothermal Activity

Edition: First

Geospatial Data Presentation Form: Digital vector data

Series Information:

Series Name: None

Issue Identification: Aleutian Islands

Publication Information:

Publication Place: Seattle, Washington

Publisher:

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington

Other_Citation_Details:

Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Prince William Sound Oil Spill Recovery Institute; Aleutians West Coastal Resource Service Area (CRSA); Aleutians East Borough; Alaska Chadux Corporation; United States Coast Guard; and National Fish & Wildlife Foundation.

Description:

Abstract

This data set contains point locations of geothermally active areas as compiled by Motyka et al., 1993. Because of the variety of geothermal activity present at any given site, each site has been mapped according to the dominant style of geothermal activity (i.e. water dominated sites, vapor dominated sites, or sites of known subsurface activity). It is important to note that at any given site, a combination of vapor, water, and subtle indicators of subsurface geothermal activity is most likely present. This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for Aleutians East Borough and Aleutians West Coastal Resource Service Area (CRSA). These data identify the marine and coastal environments and wildlife. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources.

Purpose:

The ESI data were collected, mapped, and digitized to provide environmental data for oil spill planning and response. The Clean Water Act with amendments by the Oil Pollution Act of 1990 requires response plans for immediate and effective protection of sensitive resources.

Time Period of Content:

Time Period Information:

Range_of_Dates/Times:
Beginning Date: 2000

Ending Date: 2001

Currentness_Reference:

The compilation of sites of geothermal activity was published by Motyka et al. in 1993. The complete reference is documented in the Lineage section.

Status:

Progress: Complete

Maintenance and Update Frequency: None Scheduled

Spatial Domain:

Bounding Coordinates:

West_Bounding_Coordinate: 172.42000 East_Bounding_Coordinate: -158.81002 North_Bounding_Coordinate: 58.133120 South_Bounding_Coordinate: 48.351629

Keywords:

Theme:

Theme Keyword Thesaurus: None

Theme Keyword: ESI

Theme_Keyword: Sensitivity maps Theme_Keyword: Coastal resources Theme_Keyword: Oil spill planning

Theme_Keyword: Coastal Zone Management

Theme Keyword: Geothermal activity

Place:

Place Keyword Thesaurus: None Place Keyword: Aleutian Islands

Access Constraints: None

Use Constraints:

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

Browse Graphic:

Browse_Graphic_File_Name: datafig.jpg Browse Graphic File Description:

Relationships between spatial data layers and attribute data tables for the Aleutian Islands ESI data.

Browse Graphic File Type: JPEG

Data Set Credit:

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Prince William Sound Oil Spill Recovery Institute; Aleutians West Coastal Resource Service Area (CRSA); Aleutians East Borough; Alaska Chadux Corporation; United States Coast Guard; and National Fish & Wildlife Foundation.

Native Data Set Environment:

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.0.2) and ORACLE(r) RDBMS (version 8.0.5.0.0). The hardware configuration is Hewlett Packard workstations (models 715/50 and 712/80i) with UNIX operating system (HP-UX Release A.10.20), and PC's with Windows Operating System (NT4.0/2000). The Spatial_Data_Organization Information section refers only to the source files in the ARC export format. The following files are included in that data set: birds.e00, bio_lut.e00, biofile.e00, biores.e00, breed_e00, breed_dt.e00, esi.e00, faults.e00, fish.e00, fishl.e00, geo.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, m_mampt.e00, mgt.e00, nests.e00, seasonal.e00, soc_dat.e00, soc_lut.e00, socecon.e00, sources.e00, species.e00, status.e00, volcanos.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biofile, biores, breed_dt, seasonal, soc_dat, soc_lut, socecon, sources, species, and status.

Data Quality Information:

Attribute Accuracy:

Attribute Accuracy Report:

A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.

Logical Consistency Report:

A multi-stage error checking process, described in the above Attribute_Accuracy_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles,

unnecessary node, etc.), and ORACLE(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks.

Completeness Report:

This data set is a condensed version of the information presented in Motyka et al., 1993. In the original work by Motyka et al., geothermal sites were presented in a table listing all observed geothermal features (i.e. fumeroles, mud pots, hot springs, warm springs, steaming ground, etc.) at each location. As such, each site had a unique combination of geothermal activity types. To avoid mapping 56 individually attributed points, each site is mapped according to the dominant type of geothermal activity. Hence, the spatial data set produced from the Motyka et al. table has less detail than the original compilation.

Horizontal_Positional_Accuracy_Report:

It is difficult to estimate the positional accuracy of the data, except to state that each geothermal site's latitude and longitude, as published in 1993 by Motyka et al., were compiled and plotted on hardcopy basemaps at scale of 1:250,000 and 1:63,360 (in the case of Unalaska). The coordinates provided in Motyka et al, 1993, are general site locations only, typically with more than one geothermal feature present.

Lineage:

Source Information:

Source_Citation:

Citation Information:

Originator: Motyka, Roman J., S.A. Liss, C.J. Nye, and M.A. Moorman

Publication Date: 1993

Title: Geothermal Resources of the Aleutian Arc

Geospatial Data Presentation Form: Hardocopy text and tables

Publication Information:

Publication Place: Fairbanks, AK.

Publisher:

Alaska Department of Natural Resources, Division of Geological and Geophysical Surveys

Type_of_Source_Media: Paper

Source_Time_Period_of_Content:

Time_Period_Information:

Single_Date/Time:

Calendar Date: 1993

Source Currentness Reference: Date of Survey

Source Citation Abbreviation: None

Source Contribution: Geothermal information

Process_Step:

Process Description:

In Motyka et al.'s 1993 Alaska Department of Natural Resources (DNR) report, "Geothermal Resources of the Aleutian Arc," a table of 56 known sites of geothermal activity is provided. The table includes site name, location, and the range of geothermal activity observed at each site. Geothermal activity was observed at each site as combinations of fumeroles, crater lakes, hot springs, warm springs, geysers, geothermal wells, mud pots, and steaming ground. However, because Motyka et al.'s compilation resulted in 56 sites with 56 unique combinations of geothermal activity, the table was simplified for mapping. Based on the types of activity present, sites were classified in one of three mappable categories: 1. Vapor dominated sites, 2. Water dominated sites, or 3. Subtle indicators of subsurface activity. Location and dominant geothermal activity information was entered into a .dbf file, imported into ArcInfo, and overlaid as point features atop previously scanned and georeferenced 1:250,000 USGS basemaps. Each geothermal site appears on the hardcopy maps as a yellow triangle containing a V, if vapor dominated; W, if water dominated; or S if the site is marked only by subtle indications of subsurface geothermal activity.

Process_Date: 200111 Process Contact:

Contact Information:

Contact Organization Primary:

Contact Organization: NOAA, Office of Response and Restoration

Contact Person: Jill Petersen

Contact Address:

Address_Type: Physical address Address: 7600 Sand Point Way, N.E.

City: Seattle

State_or_Province: Washington Postal Code: 98115-6349

Contact Voice Telephone: (206) 526-6944

Contact_Facsimile_Telephone: (206) 526-6329

Contact Electronic Mail Address: Jill.Petersen@noaa.gov

```
Spatial_Data_Organization_Information:
    Direct_Spatial_Reference_Method: Vector
    Point and Vector Object Information:
```

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: Entity Point

Point and Vector Object Count: 35

Spatial Reference Information:

 $Horizontal_Coordinate_System_Definition:$

Geographic:

Latitude_Resolution: 0.00005 Longitude Resolution: 0.00005

Geographic Coordinate Units: Decimal degrees

Geodetic Model:

Horizontal Datum Name: North American Datum of 1927

Ellipsoid_Name: Clark 1866 Semi-major Axis: 6378206.4

Denominator of Flattening Ratio: 294.978698

Entity and Attribute Information:

Detailed Description:

Entity_Type:

Entity_Type_Label: GEO.PAT

Entity_Type_Definition:

The GEO.PAT table contains attribute information for the vector points representing sites of geothermal activity.

Entity Type Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: NAME

Attribute Definition: General Name of Site Location Attribute Definition Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated Domain:

Enumerated Domain Value: Akun Strait

Enumerated Domain Value Definition: Name of Site

Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain:

Enumerated_Domain_Value: Akutan Fumaroles

Enumerated Domain Value Definition: Name of Site

Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated_Domain:

Enumerated Domain Value: Andrew Bay Hot Springs

Enumerated_Domain_Value_Definition: Name of Site

Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated_Domain:

Enumerated Domain Value: Chuginadak

Enumerated_Domain_Value_Definition: Name of Site

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated Domain:

Enumerated_Domain_Value: Cold Bay

Enumerated Domain Value Definition: Name of Site

Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain:

Enumerated Domain Value: Egg Island

Enumerated_Domain_Value_Definition: Name of Site

Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated_Domain:

Enumerated Domain Value: Emmons Lake

Enumerated Domain Value Definition: Name of Site

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated Domain:

Enumerated Domain Value: False Pass

Enumerated Domain Value Definition: Name of Site

Enumerated Domain Value Definition Source: Research Planning, Inc. Enumerated Domain: Enumerated Domain Value: Geyser Bight Enumerated Domain Value Definition: Name of Site Enumerated Domain Value Definition Source: Research Planning, Inc. Enumerated Domain: Enumerated Domain Value: Great Sitkin Enumerated Domain Value Definition: Name of Site Enumerated Domain Value Definition Source: Research Planning, Inc. Enumerated Domain: Enumerated Domain Value: Hague Enumerated Domain Value Definition: Name of Site Enumerated Domain Value Definition Source: Research Planning, Inc. Enumerated Domain: Enumerated Domain Value: Hot Springs Bay Enumerated Domain Value Definition: Name of Site Enumerated Domain Value Definition Source: Research Planning, Inc. Enumerated Domain: Enumerated Domain Value: Hot Springs Cove Enumerated Domain Value Definition: Name of Site Enumerated Domain Value Definition Source: Research Planning, Inc. Enumerated Domain: Enumerated Domain Value: Kagamil Enumerated Domain Value Definition: Name of Site Enumerated Domain Value Definition Source: Research Planning, Inc. Enumerated Domain: Enumerated Domain Value: Kanaga Enumerated Domain Value Definition: Name of Site Enumerated Domain Value Definition Source: Research Planning, Inc. Enumerated Domain: Enumerated Domain Value: Kenmore Enumerated Domain Value Definition: Name of Site Enumerated Domain Value Definition Source: Research Planning, Inc. Enumerated Domain: Enumerated Domain Value: Kiguga Warm Springs Enumerated Domain Value Definition: Name of Site Enumerated_Domain_Value_Definition_Source: Research Planning, Inc. Enumerated Domain: Enumerated Domain Value: Kluichef Enumerated Domain Value Definition: Name of Site Enumerated Domain Value Definition Source: Research Planning, Inc. Enumerated Domain: Enumerated Domain Value: Korovin Enumerated_Domain_Value_Definition: Name of Site Enumerated Domain Value Definition Source: Research Planning, Inc. Enumerated Domain: Enumerated_Domain_Value: Kupreanof Enumerated Domain Value Definition: Name of Site Enumerated Domain Value Definition Source: Research Planning, Inc. Enumerated Domain: Enumerated Domain Value: Little Sitkin Enumerated Domain Value Definition: Name of Site Enumerated Domain Value Definition Source: Research Planning, Inc. Enumerated Domain: Enumerated Domain Value: Lower Glacier Valley Enumerated Domain Value Definition: Name of Site Enumerated Domain Value Definition Source: Research Planning, Inc. Enumerated Domain: Enumerated Domain Value: Makushin Valley

Enumerated Domain Value Definition: Name of Site

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated Domain:

Enumerated_Domain_Value: Makushin Volcano

Enumerated Domain Value Definition: Name of Site

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated Domain:

Enumerated Domain Value: Milky River

```
Enumerated Domain Value Definition: Name of Site
```

Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain:

Enumerated Domain Value: Mount Finch

Enumerated Domain Value Definition: Name of Site

Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain:

Enumerated Domain Value: Okmok Caldera

Enumerated Domain Value Definition: Name of Site

Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain:

Enumerated Domain Value: Partov Cove

Enumerated Domain Value Definition: Name of Site

Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain:

Enumerated Domain Value: Pavlov

Enumerated Domain Value Definition: Name of Site

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated Domain:

Enumerated Domain Value: Port Moller

Enumerated Domain Value Definition: Name of Site

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated Domain:

Enumerated Domain Value: Seguam

Enumerated Domain Value Definition: Name of Site

Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain:

Enumerated Domain Value: Semisopochnoi

Enumerated_Domain_Value_Definition: Name of Site

Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain:

Enumerated Domain Value: Shishaldin

Enumerated Domain Value Definition: Name of Site

Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain:

Enumerated Domain Value: Summer Bay

Enumerated_Domain_Value_Definition: Name of Site

Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain:

Enumerated Domain Value: Upper Glacier Valley

Enumerated Domain Value Definition: Name of Site

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute Label: ACTIVITY

Attribute Definition:

Type of geothermal activity. When listed in series, the first is the most important.

Attribute Definition Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated Domain:

Enumerated Domain Value: ac

Enumerated Domain Value Definition: ACID SPRING

Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain:

Enumerated Domain Value: c

Enumerated_Domain_Value_Definition: CHLORIDE ANION DOMINANT

Enumerated Domain Value Definition Source: Research Planning, Inc

Enumerated Domain:

Enumerated Domain Value: CL

Enumerated_Domain_Value_Definition: CRATER LAKE

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc

Enumerated Domain:

Enumerated_Domain_Value: F

Enumerated Domain Value Definition: FUMAROL

Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain:

Enumerated Domain Value: G

Enumerated Domain Value Definition: GEYSER

```
Enumerated Domain Value Definition Source: Research Planning, Inc.
      Enumerated Domain:
            Enumerated Domain Value: GV
            Enumerated Domain Value Definition: GAS VENT, BOILING POINT
            Enumerated Domain Value Definition Source: Research Planning, Inc.
      Enumerated Domain:
            Enumerated Domain Value: h
            Enumerated Domain Value Definition: BICARBONATE ANION DOMINANT
            Enumerated Domain Value Definition Source: Research Planning, Inc.
      Enumerated Domain:
            Enumerated Domain Value: HS
            Enumerated Domain Value Definition: HOT SPRINGS >50 DEGREES CELSIUS
            Enumerated Domain Value Definition Source: Research Planning, Inc.
      Enumerated Domain:
            Enumerated Domain Value: WS
            Enumerated Domain Value Definition: WARM SPRINGS < 50 DEGREES CELSIUS
            Enumerated Domain Value Definition Source: Research Planning, Inc
      Enumerated Domain:
            Enumerated Domain Value: MP
            Enumerated Domain Value Definition: MUD POT
            Enumerated Domain Value Definition Source: Research Planning, Inc.
      Enumerated Domain:
            Enumerated Domain Value: s
            Enumerated Domain Value Definition: SULFATE ANION DOMINANT
            Enumerated Domain Value Definition Source: Research Planning, Inc
      Enumerated Domain:
            Enumerated Domain Value: SF
            Enumerated Domain Value Definition: SUPER HEATED FUMAROLE
            Enumerated Domain Value Definition Source: Research Planning, Inc.
      Enumerated Domain:
            Enumerated Domain Value: SG
            Enumerated Domain Value Definition: STEAMING GROUND
            Enumerated Domain Value Definition Source: Research Planning, Inc.
      Enumerated Domain:
            Enumerated Domain Value: WL
            Enumerated Domain Value Definition: GEOTHERMAL WELL
            Enumerated Domain Value Definition Source: Research Planning, Inc.
      Enumerated Domain:
            Enumerated Domain Value: ?
            Enumerated Domain Value Definition: ACTIVITY UNCONFIRMED
            Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Label: GROUP_TYPE
Attribute Definition: Site classification according to dominant activity.
Attribute Definition Source: Research Planning, Inc.
Attribute_Domain_Values:
      Enumerated Domain:
            Enumerated Domain Value: S
            Enumerated Domain Value Definition: SUBSURFACE
            Enumerated Domain Value Definition Source: Research Planning, Inc.
      Enumerated Domain:
            Enumerated Domain Value: V
            Enumerated Domain Value Definition: VAPOR
            Enumerated Domain Value Definition Source: Research Planning, Inc.
      Enumerated Domain:
            Enumerated Domain Value: W
            Enumerated Domain Value Definition: WATER
            Enumerated Domain Value Definition Source: Research Planning, Inc
```

Distribution Information:

Attribute:

Distributor:

 $Contact_Information:$

Contact Person Primary:

Contact Person: John Kaperick

Contact Organization: NOAA, Office of Response and Restoration

Contact Address:

Address_Type: Physical Address Address: 7600 Sand Point Way, N.E.

City: Seattle

State_or_Province: Washington Postal Code: 98115-6349

Contact_Voice_Telephone: (206) 526-6400 Contact_Facsimile_Telephone: (206) 526-6329

Resource Description: ESI Atlas for the Aleutian Islands

Distribution Liability:

Although these data have been processed successfully on a computer system at the National Oceanic and Atmospheric Administration, no warranty, expressed or implied, is made by NOAA regarding the utility of the data on any other system, nor shall the act of distribution constitute any such warranty. NOAA warrants the delivery of this product in computer-readable format, and will offer a replacement copy of the product when the product is determined unreadable by computer-input peripherals, or when the physical medium is delivered in damaged condition.

Custom Order Process:

Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to a wider community of GIS/mapping users. Distribution formats include ARC export, MOSS and Shape files, and MARPLOT map folders. An ArcView ESI project and ESI_Viewer product are also included on the distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

 $Metadata_Reference_Information:$

Metadata Date: 200205

Metadata Review Date: 200205

Metadata Contact:

Contact Information:

Contact Person Primary:

Contact Person: Jill Petersen

Contact Organization: NOAA, Office of Response and Restoration

Contact Position: GIS Manager

Contact Address:

Address_Type: Physical Address Address: 7600 Sand Point Way, N.E.

City: Seattle

State_or_Province: Washington Postal Code: 98115-6349

Contact_Voice_Telephone: (206) 526-6944 Contact Facsimile Telephone: (206) 526-6329

Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov Metadata Standard Name: Content Standards for Digital Geospatial Metadata

Metadata Standard Version: FGDC-STD-001-1998

Generated by mp version 2.7.23 on Fri May 17 10:05:04 2002

Aleutian Islands Coastal Resources Inventory and Environmental Sensitivity Maps: VOLCANOS (Volcano Points)

Metadata also available as - [Parseable text] - [SGML]

Metadata:

- Identification Information
- Data Quality Information
- Spatial Data Organization Information
- Spatial Reference Information
- Entity and Attribute Information
- <u>Distribution Information</u>
- Metadata Reference Information

Identification Information:

Citation:

Citation Information:

Originator:

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Prince William Sound Oil Spill Recovery Institute; Aleutians West Coastal Resource Service Area (CRSA); Aleutians East Borough; Alaska Chadux Corporation; United States Coast Guard; and National Fish & Wildlife Foundation.

Publication Date: 200205

Title:

Aleutian Islands Coastal Resources Inventory and Environmental Sensitivity Maps: VOLCANOS (Volcano Points)

Edition: First

Geospatial Data Presentation Form: Digital vector data

Series Information:

Series Name: None

Issue Identification: Aleutian Islands

Publication Information:

Publication Place: Seattle, Washington

Publisher:

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington

Other Citation Details:

Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Prince William Sound Oil Spill Recovery Institute; Aleutians West Coastal Resource Service Area (CRSA); Aleutians East Borough; Alaska Chadux Corporation; United States Coast Guard; and National Fish & Wildlife Foundation.

Description:

Abstract

This data set contains point locations of active volcanoes as compiled by Motyka et al., 1993. Eighty-nine volcanoes with eruptive phases in the Quaternary are mapped as points centered in the active caldera or volcano summit. Volcanoes with a number of satellite vents and/or cones distributed around the main caldera or summit are given a unique identifier so it is clear that geothermal activity is likely to be found away from the point on the map. Different volcanic morphologies (Strato, Composite, Sheild) and eruptive histories are not noted in the digital data set, though this information was originally included in the Motyka et al. publication. This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for Aleutians East Borough and Aleutians West Coastal Resource Service Area (CRSA). These data identify the marine and coastal environments and wildlife. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources.

Purpose:

The locations of active volcanoes along the Aleutians Arc were mapped as part of a general assessment of the geophysical hazards present.

Time Period of Content:

Time Period Information:

Range of Dates/Times:

Beginning_Date: 2000 Ending_Date: 2001

Currentness_Reference:

The compilation of Quaternary Volcanoes was published by Motyka et al. in 1993. The complete reference is documented in the Lineage section.

Status:

Progress: Complete

Maintenance and Update Frequency: None Scheduled

Spatial Domain:

Bounding Coordinates:

West_Bounding_Coordinate: 172.42000 East_Bounding_Coordinate: -158.81002 North_Bounding_Coordinate: 58.133120 South_Bounding_Coordinate: 48.351629

Keywords:

Theme:

Theme Keyword Thesaurus: None

Theme Keyword: ESI

Theme_Keyword: Sensitivity maps Theme_Keyword: Coastal resources Theme_Keyword: Oil spill planning

Theme Keyword: Coastal Zone Management

Theme Keyword: Volcano

Place:

Place Keyword Thesaurus: None Place Keyword: Aleutian Islands

Access Constraints: None

Use Constraints:

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

Browse Graphic:

Browse_Graphic_File_Name: datafig.jpg Browse Graphic File Description:

Relationships between spatial data layers and attribute data tables for the Aleutian Islands ESI data.

Browse Graphic File Type: JPEG

Data Set Credit:

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Prince William Sound Oil Spill Recovery Institute; Aleutians West Coastal Resource Service Area (CRSA); Aleutians East Borough; Alaska Chadux Corporation; United States Coast Guard; and National Fish & Wildlife Foundation.

Native Data Set Environment:

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.0.2) and ORACLE(r) RDBMS (version 8.0.5.0.0). The hardware configuration is Hewlett Packard workstations (models 715/50 and 712/80i) with UNIX operating system (HP-UX Release A.10.20), and PC's with Windows Operating System (NT4.0/2000). The Spatial_Data_Organization Information section refers only to the source files in the ARC export format. The following files are included in that data set: birds.e00, bio_lut.e00, biofile.e00, biores.e00, breed_e00, breed_dt.e00, esi.e00, faults.e00, fish.e00, fishl.e00, geo.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, m_mampt.e00, mgt.e00, nests.e00, seasonal.e00, soc_dat.e00, soc_lut.e00, socecon.e00, sources.e00, species.e00, status.e00, volcanos.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biofile, biores, breed_dt, seasonal, soc_dat, soc_lut, socecon, sources, species, and status.

Data_Quality_Information:

Attribute Accuracy:

Attribute Accuracy Report:

A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.

Logical Consistency Report:

A multi-stage error checking process, described in the above Attribute_Accuracy_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles,

unnecessary node, etc.), and ORACLE (r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks.

Completeness_Report:

These data represent a synthesis by Motyka et al., 1993, of expert knowledge and available hardcopy reports. The data are regarded as complete with respect to the locations of known volcanic calderas. The data set presented here includes only volcano location and name, whereas Motyka et al.'s original work includes morphology, eruptive history, magmatic system characterization, and gross mineralogical properties.

Positional Accuracy:

Horizontal Positional Accuracy:

Horizontal Positional Accuracy Report:

It is difficult to estimate the positional accuracy of the data, except to state that each volcano's latitude and longitude, as published in 1993 by Motyka et al., were compiled and plotted on hardcopy basemaps at scale of 1:250,000 and 1:63,360 (in the case of Unalaska). The coordinates provided in Motyka et al., 1993, were of the eruptive center within the caldera, if visible; the center of the caldera, if no eruptive center was visible; or the summit of the volcano, if no caldera was present.

Lineage:

Source Information:

Source Citation:

Citation Information:

Originator: Motyka, Roman J., S.A. Liss, C.J. Nye, and M.A. Moorman

Publication Date: 1993

Title: Geothermal Resources of the Aleutian Arc

Geospatial Data Presentation Form: Hardcopy text and tables

Publication Information:

Publication Place: Fairbanks, AK.

Publisher:

Alaska Department of Natural Resources, Division of Geological and Geophysical Surveys

Type_of_Source_Media: Paper

Source Time Period of Content:

Time_Period_Information:

Single Date/Time:

Calendar Date: 1993

Source Currentness Reference: Date of Survey

Source Citation Abbreviation: None

Source Contribution: Volcano information

Process_Step:

Process_Description:

In Motyka et al.'s 1993 Alaska Department of Natural Resources (DNR) report, "Geothermal Resources of the Aleutian Arc," a table of 89 volcanoes with known Quaternary eruptions is provided. The table includes name, eruptive history, composition, morphology, and location of each volcano in the Aleutians Arc. Name and location information was entered into a .dbf file, imported into ArcInfo, and overlaid atop previously scanned and georeferenced 1:250,000 USGS basemaps. Each point representing a caldera or volcanic summit location, and having satellite cone and/or vent activity, was given an Identifier "P" in the attribute table.

Process_Date: 200111

Process_Contact:

Contact_Information:

Contact_Organization_Primary:

Contact_Organization: NOAA, Office of Response and Restoration

Contact Person: Jill Petersen

Contact_Address:

Address_Type: Physical address Address: 7600 Sand Point Way, N.E.

City: Seattle

State_or_Province: Washington

Postal_Code: 98115-6349

Contact_Voice_Telephone: (206) 526-6944 Contact_Facsimile_Telephone: (206) 526-6329

Contact Electronic Mail Address: Jill.Petersen@noaa.gov

Spatial Data Organization Information:

Direct Spatial Reference Method: Vector

Point and Vector Object Information:

SDTS Terms Description:

SDTS Point and Vector Object Type: Entity Point

Point_and_Vector_Object_Count: 57

```
Spatial Reference Information:
      \overline{H}orizontal \overline{C}oordinate System Definition:
            Geographic:
                  Latitude Resolution: 0.00005
                  Longitude Resolution: 0.00005
                  Geographic Coordinate Units: Decimal degrees
            Geodetic Model:
                  Horizontal Datum Name: North American Datum of 1927
                  Ellipsoid Name: Clark 1866
                  Semi-major Axis: 6378206.4
                  Denominator of Flattening Ratio: 294.978698
Entity and Attribute Information:
      Detailed Description:
            Entity Type:
                  Entity_Type_Label: VOLCANOS.PAT
                  Entity Type Definition:
                         The VOLCANOS.PAT table contains attribute information for the vector point data representing locations of
                         active and inactive volcanoes.
                  Entity Type Definition Source: Research Planning, Inc.
            Attribute:
                  Attribute_Label: MAP
                  Attribute Definition:
                         An identifier that links records in the VOLCANOS.PAT to the number for each volcano plotted on the maps.
                  Attribute Definition Source: Research Planning, Inc.
                  Attribute Domain Values:
                         Range Domain:
                               Range Domain Minimum: 1
                               Range Domain Maximum: 57
            Attribute:
                  Attribute Label: VOLCANO
                  Attribute Definition: Name of Volcano
                  Attribute Definition Source: Research Planning, Inc.
                  Attribute Domain Values:
                         Enumerated Domain:
                               Enumerated Domain Value: Akun Strait
                               Enumerated Domain Value Definition: Name of Site
                               Enumerated Domain Value Definition Source: Research Planning, Inc.
                         Enumerated Domain:
                               Enumerated Domain Value: Akutan Fumaroles
                               Enumerated Domain Value Definition: Name of Site
                               Enumerated Domain Value Definition Source: Research Planning, Inc.
                         Enumerated Domain:
                               Enumerated Domain Value: Andrew Bay Hot Springs
                               Enumerated Domain Value Definition: Name of Site
                               Enumerated Domain Value Definition Source: Research Planning, Inc.
                         Enumerated Domain:
                               Enumerated Domain Value: Chuginadak
                               Enumerated Domain Value Definition: Name of Site
                               Enumerated Domain Value Definition Source: Research Planning, Inc.
                         Enumerated Domain:
                               Enumerated Domain Value: Cold Bay
                               Enumerated Domain Value Definition: Name of Site
                               Enumerated Domain Value Definition Source: Research Planning, Inc.
                         Enumerated Domain:
                               Enumerated Domain Value: Egg Island
                               Enumerated Domain Value Definition: Name of Site
                               Enumerated Domain Value Definition Source: Research Planning, Inc.
                         Enumerated Domain:
                               Enumerated Domain Value: Emmons Lake
```

Enumerated Domain Value Definition: Name of Site

Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain:

Enumerated Domain Value: False Pass

Enumerated Domain Value Definition: Name of Site

Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain:

Enumerated Domain Value: Geyser Bight

Enumerated Domain Value Definition: Name of Site

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated Domain:

Enumerated Domain Value: Great Sitkin

Enumerated Domain Value Definition: Name of Site

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated Domain:

Enumerated Domain Value: Hague

Enumerated Domain Value Definition: Name of Site

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated Domain:

Enumerated Domain Value: Hot Springs Bay

Enumerated Domain Value Definition: Name of Site

Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain:

Enumerated Domain Value: Hot Springs Cove

Enumerated Domain Value Definition: Name of Site

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated Domain:

Enumerated Domain Value: Kagamil

Enumerated Domain Value Definition: Name of Site

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated Domain:

Enumerated Domain Value: Kanaga

Enumerated Domain Value Definition: Name of Site

Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain:

Enumerated Domain Value: Kenmore

Enumerated Domain Value Definition: Name of Site

Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain:

Enumerated Domain Value: Kiguga Warm Springs

Enumerated_Domain_Value_Definition: Name of Site

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated Domain:

Enumerated Domain Value: Kluichef

Enumerated Domain Value Definition: Name of Site

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated Domain:

Enumerated_Domain_Value: Korovin

Enumerated_Domain_Value_Definition: Name of Site

Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain:

Enumerated Domain Value: Kupreanof

Enumerated Domain Value Definition: Name of Site

Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain:

Enumerated Domain Value: Little Sitkin

Enumerated Domain Value Definition: Name of Site

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated Domain:

Enumerated_Domain_Value: Lower Glacier Valley

Enumerated Domain Value Definition: Name of Site

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated Domain:

Enumerated Domain Value: Makushin Valley

Enumerated Domain Value Definition: Name of Site

Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain:

Enumerated Domain Value: Makushin Volcano

Enumerated Domain Value Definition: Name of Site

```
Enumerated Domain Value Definition Source: Research Planning, Inc.
      Enumerated Domain:
            Enumerated Domain Value: Milky River
            Enumerated Domain Value Definition: Name of Site
            Enumerated Domain Value Definition Source: Research Planning, Inc.
      Enumerated Domain:
            Enumerated Domain Value: Mount Finch
            Enumerated Domain Value Definition: Name of Site
            Enumerated Domain Value Definition Source: Research Planning, Inc.
      Enumerated Domain:
            Enumerated Domain Value: Okmok Caldera
            Enumerated Domain Value Definition: Name of Site
            Enumerated Domain Value Definition Source: Research Planning, Inc.
      Enumerated Domain:
            Enumerated Domain Value: Partov Cove
            Enumerated Domain Value Definition: Name of Site
            Enumerated Domain Value Definition Source: Research Planning, Inc.
      Enumerated Domain:
            Enumerated Domain Value: Pavlov
            Enumerated Domain Value Definition: Name of Site
            Enumerated Domain Value Definition Source: Research Planning, Inc.
      Enumerated Domain:
            Enumerated Domain Value: Port Moller
            Enumerated Domain Value Definition: Name of Site
            Enumerated Domain Value Definition Source: Research Planning, Inc.
      Enumerated Domain:
            Enumerated Domain Value: Seguam
            Enumerated Domain Value Definition: Name of Site
            Enumerated Domain Value Definition Source: Research Planning, Inc.
      Enumerated Domain:
            Enumerated Domain Value: Semisopochnoi
            Enumerated Domain Value Definition: Name of Site
            Enumerated Domain Value Definition Source: Research Planning, Inc.
      Enumerated Domain:
            Enumerated Domain Value: Shishaldin
            Enumerated Domain Value Definition: Name of Site
            Enumerated Domain Value Definition Source: Research Planning, Inc.
      Enumerated Domain:
            Enumerated Domain Value: Summer Bay
            Enumerated Domain Value Definition: Name of Site
            Enumerated Domain Value Definition Source: Research Planning, Inc.
      Enumerated Domain:
            Enumerated Domain Value: Upper Glacier Valley
            Enumerated Domain Value Definition: Name of Site
            Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Label: P
Attribute Definition:
      Denotes the presence of proximal satellite cones and vents around the mapped caldera location
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
            Enumerated Domain Value: P
            Enumerated Domain Value Definition: Satellite cones or vents present
            Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Domain Values:
      Enumerated Domain:
            Enumerated Domain Value: U
            Enumerated Domain Value Definition: Satellite unconfirmed or not present
```

Enumerated Domain Value Definition Source: Research Planning, Inc.

Distribution Information:

Attribute:

Distributor:

Contact Information:

Contact Person Primary:

Contact Person: John Kaperick

Contact Organization: NOAA, Office of Response and Restoration

Contact Address:

Address_Type: Physical Address Address: 7600 Sand Point Way, N.E.

City: Seattle

State_or_Province: Washington Postal Code: 98115-6349

Contact_Voice_Telephone: (206) 526-6400 Contact_Facsimile_Telephone: (206) 526-6329

Resource Description: ESI Atlas for the Aleutian Islands

Distribution Liability:

Although these data have been processed successfully on a computer system at the National Oceanic and Atmospheric Administration, no warranty, expressed or implied, is made by NOAA regarding the utility of the data on any other system, nor shall the act of distribution constitute any such warranty. NOAA warrants the delivery of this product in computer-readable format, and will offer a replacement copy of the product when the product is determined unreadable by computer-input peripherals, or when the physical medium is delivered in damaged condition.

Custom Order Process:

Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to a wider community of GIS/mapping users. Distribution formats include ARC export, MOSS and Shape files, and MARPLOT map folders. An ArcView ESI project and ESI_Viewer product are also included on the distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

 $Metadata_Reference_Information:$

Metadata_Date: 200205

Metadata_Review_Date: 200205

Metadata Contact:

Contact Information:

Contact Person Primary:

Contact_Person: Jill Petersen

Contact Organization: NOAA, Office of Response and Restoration

Contact Position: GIS Manager

Contact Address:

Address_Type: Physical Address Address: 7600 Sand Point Way, N.E.

City: Seattle

State_or_Province: Washington Postal Code: 98115-6349

Contact_Voice_Telephone: (206) 526-6944 Contact_Facsimile_Telephone: (206) 526-6329

Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov

Metadata Standard Name: Content Standards for Digital Geospatial Metadata

Metadata Standard Version: FGDC-STD-001-1998

Generated by mp version 2.7.23 on Fri May 17 10:00:25 2002

Relationships between spatial data layers and attribute data tables

